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## In Search of a Scapegoat

It is becoming increasingly apparent that all sides of the railway industry are beginning to realise that the Government is determined to find a scapegoat for the consequence of its own and its predecessors' maladministration of the British transport industry. There has never been a time in this country, or indeed in any of the overseas territories in which nationalised railway systems are common, when there has been such unanimous condemnation of Government action. On the other hand, it is probably without precedent that a committee of inquiry has been appointed with its findings already outlined by the Government creating it, and with little more to do than to provide evidence to support an answer which has already been decided before its investigation is undertaken. The disturbing effect of so peculiarly an un-British approach to a problem is abundantly evident both among railway officers and trade union leaders. The National Union of Railwaymen has given voice to its disquietude in the General Secretary's report to the annual conference at Torquay. The official report of the British Transport Commission has made an oblique reference "to inquiries of political origin" now taking place. If the inquiry now being made into the affairs of the

British Transport Commission, and particularly into those of British Railways, had been free from the stigma of terms of reference which pre-determined its outcome, there might have been hope that its report, when made, would have apportioned the blame for the present financial position of the Commission fairly between Government action and any shortcomings of the transport administration. Apparently, past interference in railway affairs activated by political considerations and fears of upsetting the electorate or of disturbing labour relations are not to be taken into account, notwithstanding the fact that by these actions the Commission has been hamstrung and impoverished. If at the present stage, when the modernisation plan is beginning to bear fruit, this is to be curtailed to satisfy ministerial convenience, there is every good reason why the decisions involved should be announced publicly and debated. This would provide an opportunity to assess the proportion of responsibility ascribable to the differing parties. Mere decentralisation of accounting methods into the Regions will not add a ton to the traffic carried or a £ to the passenger revenue, but it may well lead to an increase in overhead charges.

## M. Jean Goursat

THE death in Paris last week, at the early age of 64, of M. Jean Goursat, formerly General Manager of the French National Railways, will be deeply regretted, not least by many railwaymen in Britain and other countries with whom he associated in connection with international questions. He was a versatile man, and his diverse capabilities were of the greatest assistance to him when he was given the task of unifying operating procedures after the creation of the new French National Railways in 1938. Mobilisation and the outbreak of war in 1939 brought him heavy new responsibilities. An ardent patriot, he did all he could during the occupation of 1940-44 to keep alive the commercial traffic of the French railways, while resisting the demands of the occupation authorities. After the war, as General Manager of the system during the critical period of reconstruction, he actively pursued a vigorous policy, and did much to foster international traffic. In this latter sphere his attractive personality and powers of negotiation were a great help in work of lasting importance to the progress of the co-operation between European railways.

## C.P.R. Freight Traffic Reorganisation

THE Freight Traffic Department of the Canadian Pacific Railway has been modified to provide a more efficient traffic organisation, notably in the expeditious quotation of rates and in the rapid fulfilment of the requirements of railway users. The changes, announced by Mr. C. D. Edsforth, Vice-President, Traffic, C.P.R., took effect on July 1. They involve the re-organisation of the Department into four regional divisions, which are the Pacific, Prairie, Eastern, and Atlantic regions comprising British Columbia and Alberta; Saskatchewan, Manitoba, and eastward to the head of the Great Lakes; the greater part of Ontario; and the Provinces east thereof. Regional headquarters are at Vancouver, Winnipeg, Toronto, and Montreal. The officials responsible for freight traffic in the four regions are Messrs. T. Hooks, F. K. Hollyman, A. M. Shields, and J. Swinarton, to whom reference is made in our personal columns. The modified form of organisation is intended to facilitate development of "piggy-back" traffic, a field in which the Canadian railways are making considerable progress.

## British Exhibition in New York

SPEAKING in London on June 28 after return from America, Lord Rootes, Chairman of the Dollar Exports Council, said that the British Exhibition in New York (June 10-26) was not only a good example of smooth Anglo-American relations, but a demonstration of successful British teamwork. The Dollar Exports Council, the Federation of British Industries, and British Overseas Fairs Limited had worked in complete harmony and the result had surpassed all expectations. To give examples: over 30,000 buyers had registered their names; more than 100 enquiries for factory development in Britain had been made; the British Travel & Holidays Association had received more than 16,000 enquiries, the shipping lines

more than 4,000, and the airlines more than 3,500; one exhibitor had received enquiries from seven countries in addition to the U.S.A. and Canada, and another had booked orders worth more than \$400,000. Full co-operation between exhibitors and H.M. Government's commercial officers in North America had shown those officials to be of extremely high calibre—more use should be made of them by British industry. Continental and Japanese competition was fierce—our balance of payments problem was acute—and both Government and nation must ensure that, particularly under the coming conditions brought about by dollar liberalisation, inflation was checked and costs lowered. Failure to achieve these twin aims would bring ultimate disaster.

### Gloucester Railway Carriage Celebrations

**A**MONG the celebrations held by the Gloucester Railway Carriage & Wagon Co. Ltd. in connection with the centenary of the company was a reception at Whitehall Court in London on June 30 which was attended by a large number of guests, representative of railway and similar interests. The Chairman of the Gloucester Railway Carriage & Wagon Co. Ltd., General Sir William Morgan, received the guests, and the other directors and chief executives of the company assisted him as hosts. The Crown Agents, consulting engineers, and many companies which have acted as sub-contractors to the Gloucester company on many of its contracts, both for home and overseas railways, were represented; so also were several important railway undertakings, including the British Transport Commission, British Railways, the London Transport Executive, the South African Railways, the Nigerian Railways, the Rhodesian Railways, and the Ghana Railways. The Federation of Nyasaland & Rhodesia was represented by the Deputy High Commissioner, Mr. B. J. Barratt, and the Sudan Embassy by Mr. A. J. Lenox. The War Office and financial interests were also well represented.

### Indian Railway Associations with Britain

**T**HE visit to Britain last week of Mr. Karnail Singh, Chairman of the Indian Railway Board, strengthened the firm friendship between the Indian railways and British railwaymen and suppliers of railway material. He was the guest of honour at a dinner given by the United Kingdom Railway Advisory Service at the Savoy Hotel, London, on Thursday, under the chairmanship of Brigadier A. E. M. Walter, head of the International Inland Transport Branch of the Ministry of Transport, which sponsors U.K.R.A.S. Brigadier Walter reminded his audience of the purpose of the Advisory Service, stressing the advances in technical knowledge which British Railways and British industry could share with railways overseas under the aegis of U.K.R.A.S., more particularly as the result of the progress made with railway modernisation. Mr. Karnail Singh, replying, stressed the gratitude of his Government and of his colleagues for what British railway officers and suppliers of rolling stock and other railway material had done and were doing for Indian railways. The guests included Mr. L. T. Madhani, Railways Adviser to the High Commissioner for India, and Mr. H. D. Awasty, General Manager & Chief Engineer (Railway Electrification) Indian Railway Board, who is studying electrification problems in this country. The dinner was attended by representatives of British Government Departments, the British Transport Commission, and trade associations concerned with railways.

### The Midland Pullman

**O**N Monday last the Midland Pullman went into service between Manchester and London and London and Leicester. These diesel-electric luxury trains built for British Railways by the Metropolitan-Cammell Carriage & Wagon Co. Ltd. were described in detail and illustrated in our June 24 issue. An inaugural run took place between London and Leicester and back on July 1 when a number of guests of the London Midland Region and the Pullman Car Co. Ltd. were given an opportunity of experiencing the high standards of comfort and excellent running properties of these six coach trains. A list of those invited is given elsewhere in this issue. The Midland Pullman provides the fastest overland service between Manchester and London. It carries 132 first class passengers

and leaves Manchester Central at 8.50 a.m. and arrives at St. Pancras, London, at 12.03 p.m. The return journey is at 6.10 p.m. from St. Pancras, arriving at Manchester at 9.21 p.m. The Leicester service leaves London at 12.45 p.m. and arrives at Leicester 2.10 p.m. with a return journey from Leicester at 2.33 p.m. arriving at London at 4 p.m. From the viewpoint of the Manchester service it is a pity that the arrival time at London is not earlier. An advance of an hour at the starting and arrival times would enable business men to visit their offices in London before keeping luncheon appointments. An 8 a.m. start would not be too early and would certainly be appreciated by many of the business community.

### Indian Permanent Way

**T**HE Chairman of the Indian Railway Board, Mr. Karnail Singh, in an article in the "Indian Railways Annual, 1960," has pointed out that the renewal of rails in his country entails an annual purchase of 200,000 tons of steel. On such large recurring quantities even small savings in the weight of a rail will pay rich dividends. Indian steel plants have been able to meet only a part of railway demands in the past, but the three new great plants established during the current Five-Year Plan, with the enlarged older plants, when they reach full production will make India self-sufficient in this major item of equipment. These and other remarkable developments will produce a large volume of additional traffic, demanding heavier axle-loads, higher speeds and, therefore, stronger rails. Accordingly, a new 105-lb. rail is being adopted laid in 432-ft. lengths on broad-gauge trunk routes.

### Permanent Way Institution Summer Convention

**T**HE co-operation and hospitality of the Belgian National Railways, through the good offices of Monsieur Marcel de Vos, General Manager, contributed much to the success of the 1960 Summer Convention of the Permanent Way Institution, held this year in Belgium. A large party was led by the President, Mr. C. E. Dunton, Chief Civil Engineer, London Transport Executive. At the annual summer meeting on May 27, in the Ostend Palace Hotel, Mr. A. K. Terris, Chief Civil Engineer, Eastern Region, British Railways, was nominated President of the Institution for the coming year. The annual summer dinner was attended by Monsieur M. de Vos, who had been elected an Honorary Fellow of the Institution, other officers of the S.N.C.B., and permanent way engineers of other European railways, also, in the absence of the British Ambassador, Mr. G. M. Warr, Chargé d'Affaires in Brussels. Technical visits included the train ferry berth at Zeebrugge, the S.N.C.B. Bascoup Permanent Way Depot near Brussels, and the new weed-killing plant; the long-welded rail shops at Schaerbeek; and steel plants near Liège; the Hauts Fourneaux et Cokeries of the S.A. Cockerill-Ougrée at Seraing, the rolling mills at Ougrée, and the Ferblat plant at Tilleur. An outstanding social event was the Repas Breughelien in the Belfry at Bruges, where the guests included Mr. John Ratter, Member of the British Transport Commission.

### Cheriton-Folkestone Central Widening

**T**HE Cheriton to Folkestone Central widening now in progress on the Southern Region of British Railways (which will be described in greater detail in a subsequent issue) will permit the increased services resulting from the extension of electrification to be operated without hindrance to boat trains and reliefs. This will particularly apply to inward services, the timings of which are often affected by delays in boat arrivals. The project, which comprises the quadrupling of the running lines between Cheriton and Folkestone Central, includes alterations to Shorncliffe Station and the major reconstruction of Folkestone Central Station. The latter will have two island platforms, a new low-level booking hall and parcels office, and new platform buildings. The work will also include alterations to three bridges and one footbridge; the construction of a new footbridge, a massive retaining wall, a signalbox, and a footpath, and the demolition of a cable-carrying structure over Risborough Road. Excavation will involve the removal of about 62,000 cu. yd. The whole project is being carried out during the operation of normal services and the provision of normal passenger facilities.



### Comfortable Travel to the Continent

AN example of efficiency, comfort and convenience in a surface route to the Continent, affording advantages lacking in air travel, is the Southampton-Havre service of British Railways, Southern Region. In overnight journeys between London and Paris there are convenient departures after, and arrivals before, business hours, with choices of connecting trains between Waterloo and Southampton and Paris St. Lazare and Havre. The French train service may well be improved on electrification of the Paris-Rouen-Havre line. The ss. *Normannia* is well appointed, with the high standard of service familiar to passengers in Southern Region vessels. In descriptive literature issued by the Region the service is referred to as the "leisurely way to Paris." That is true, and for that reason it is a pleasant means of travel for the holidaymaker; but the timetable makes it a good route for the businessman as well. No air line affords the same combination of comfort, personal service, and apparent leisureliness without waste of time.

### New Diesel Locomotives for C.I.E.

THE placing of contracts by Coras Iompair Eireann for 36 new diesel-electric and diesel-hydraulic locomotives from United States and German firms is a further step in its plan for complete conversion to diesel traction. The purchase of these new units will mean that 92 per cent of both passenger and freight trains will be operated by diesel power. The change-over from steam traction has already resulted in a saving of £1,000,000 a year in fuel costs alone and has played a large part in the improvement of C.I.E. railway services. Faster, cleaner trains and brighter stations form part of the programme to raise the general standard of service. The newly introduced named trains "Failte" and "Slainte" on the Cork line and "Cu na Mara" on the Galway service, are all hauled by diesel power and are building up an excellent reputation for speed, comfort, and punctuality. Details of the new locomotives, are recorded on page 57.

### North-Eastern Signalling Developments

SINCE 1902, the predecessors of the North Eastern Region of British Railways have developed a tradition of modern signalling practice. This found its prototype in the Newcastle area, where electro-pneumatic signalling was installed in 1902-6. Later, in 1928, three-aspect automatic colour-light signalling was provided on the East Coast main line south of Darlington and between York (Skelton) and Darlington South. Last year, route-relay interlocking was brought into use at Newcastle Central. Plans covering the Darlington-Newton Hall and Shaftholme Junction-Naburn sections have been formulated. Away from the main line on the East Coast, a number of major colour-light signalling schemes have been implemented or authorised. The whole of the South Tyneside electrified line and coast route to Sunderland and West Hartlepool is to have colour-light signalling, and the four new mechanised marshalling yards for which modern signalling has been devised will fit into an overall plan to fit the concentration of signalling control of main lines at central power boxes. Centralised traffic control will become more economic and signalling of lines will provide additional economies.

### Western Railway Bombay Suburban Services

DURING the period 1921-58 the population of Bombay and the surrounding area rose by 370 per cent. The corresponding increase in industrial activity has necessitated an even more rapid growth of suburban passenger traffic. Between 1938-39 and 1958-59 only there was an increase in the number of passengers carried of 372 per cent and in the number of trains run of 357 per cent. Yet the percentage increase in the number of electric multiple-unit sets was only 55. Between 1955-56 and 1958-59 the average of punctuality of suburban trains rose from 84 to 95.6 per cent and further improvement is aimed at. Of the 31 multiple-unit sets in service 20 are over 30 years old and are responsible for 90 per cent of the failures. Measures planned to meet increasing traffic include reduction of headway from 4 to 3½, nine-vice eight-coach trains, and provision of more rolling stock.

### Twelfth Year of State Transport

TWO things are clear from the report and accounts for 1959 of the British Transport Commission: first, that very real progress was made in modernising and re-equipping British Railways and in increasing all-round efficiency, which continues to result in considerable economies; second, that the increases in railway revenue were, and are likely in the near future, to remain comparatively modest. The reduction in the working deficit of British Railways to £42,000,000 last year, from £48,100,000, was a creditable feat, made possible by better plant and equipment and by more efficient working in many spheres of railway activity. With capital charges unchanged at £42,000,000 the total loss on the railways was £84,000,000, compared with £90,000,000 in 1958. Over and above this, implementation of the Guillebaud Committee recommendations is now costing £40,000,000 a year. The tables elsewhere in this issue show the principal results for British Railways and the other undertakings of the Commission. Passenger traffic is increasing, largely, it is claimed, probably with justice, as the result of increased commercial effort on the part of railway staffs and some travel agents. The reduction in manpower and increase in productivity, largely as the result of work study, continue. Goods traffic generally is disappointing. There is reason to hope that greater efficiency, if it is shown by all grades of railwaymen and as better plant for handling and moving freight becomes available, and train services and arrangements for marshalling and operating generally are improved, will attract more traffic. It has done so already in some areas. The increase in mineral traffic receipts has been considerable, but, to judge by experience of rises in steel production, traffic is not likely to increase much more steeply in the foreseeable future. Coal class traffic is known to be declining, though British Railways secured a greater share. The increase in merchandise receipts will have to be very considerable to make much difference to the financial position of the Commission.

The surpluses on all the other carrying activities except inland waterways, and on docks, hotels, refreshment rooms, and letting of land and buildings, helped to reduce the total working deficit of the Commission from £28,100,000 in 1958 to £12,600,000 last year. The turnover of the Commission is some £75,000,000, so that the deficit, though serious, is not in itself as great, when considered as a percentage of the turnover, as the figure might at first suggest.

What causes much uneasiness is the prospect that the deficit on the railways may be made the excuse for pruning expenditure on re-equipping and modernising them. Any drastic cuts would destroy hopes of increasing their efficiency, improving their services, and adding to their revenues, not least by lowering the morale of railwaymen who are just beginning to gain confidence from the new plant being provided on an increasing scale for their use. Of the deficits on the non-carrying activities, the loss of £482,000 on refreshment cars may be regarded as the cost of providing an essential amenity of travel; it is small compared with British Railways passenger receipts of £140,000,000. In the face of air competition, the net receipts of £3,900,000 on shipping services, with total receipts at £18,300,000, are most satisfactory, and compare well with net receipts of £2,300,000 for 1958.

Although London Transport traffics recovered partly from the effects of the 1958 bus strike, they are subject to a number of limitations outside management control, and in these circumstances L.T.E. did well to pay its way in 1959. "It is evident," the report states, "that public transport still bears a vital responsibility in the life of the nation, even if the number of passenger road vehicles licensed is going to double in the next 15 years."

The Commission has given the managements of its passenger transport undertakings every encouragement to continue to improve services offered. The fares paid for the L.T.E. and other bus services of the Commission have not kept pace with the general level of prices in the country. Even after the adjustments which were made in rail, bus and coach fares during 1959 by sanction of the various fare-fixing authorities, most of these fares in real terms were at the year's end still well below their pre-war level; but the outlook for public road transport is not bright, in view of the increase of ownership of private transport vehicles.

Because what the Commission terms "two enquiries of

political origin," by the Select Committee on Nationalised Industries and by the Special Advisory Group, are taking place, the report is confined mainly to summarising commercial and technical advances. Mention of some of these is made in the article elsewhere in this issue. Space does not allow of reference to many others in the series of well-expressed summaries, of which the report largely consists. From that point of view it is an admirable document which will be of interest to all who wish to see what a progressive transport undertaking is achieving in many technical spheres. Technical progress, the keynote of the report and the mental alertness which engenders it and in turn is fostered by it, will enable the nationalised transport undertaking, and notably British Railways, to improve its financial position. It would be a pity if, for motives of economy, the Government were to impose restrictions on expenditure which would not only slow down, but largely stultify, progress towards greater efficiency and viability.

The reception of the report by the press on the whole has been favourable, though it is realised that losses on the railways are bound to continue for some time.

### The Need for Capital Reconstruction

THE fact that the real deficit of the British Transport Commission for 1959 was less than for the previous year, when full allowance is made for Central Charges, including that part of interest charges which is transferred to the Special Account in respect of the revenue deficit on British Railways, in no way diminishes the urgency for a reconstruction of the capital structure of the Commission, and a readjustment of its obligations. The accounts point the inevitability of this, whether they be examined from the point of view of the revenue or of the capital position.

As regards the former, irrespective of the deferment of interest, the 1959 improvement in railway revenues, which resulted in a reduction of their working deficit by £6.1 million, was more than absorbed by the year's increase in central charges of £10.1 million. All but £800,000 of this arises either from increased interest on advances in respect of past deficits of British Railways, or from interest on borrowings for capital purposes, for practically all the increase the railways were responsible. This means that in effect the improvement in railway revenue resulting from modernisation is each year being more than swallowed up by the increase in allocations for additional interest.

That state of affairs will continue as long as capital is borrowed for modernisation and the interest thereon deferred and as long as deficits are incurred. This, therefore, is the main obstacle to the attainment of viability by the Commission. Central charges already amount to £87 million a year, compared with less than £50 million ten years ago, and in last year's Re-appraisal Report were estimated to total some £110 million by 1965. It now looks as though this will prove an under-estimate. No end to deficits is therefore in sight because, however successful may be the Commission in effecting further economies, and the Stedeford Special Advisory Group in recommending other reforms, it seems that the mounting interest charges will almost certainly absorb any savings arising therefrom, especially when the implementation of the Guillebaud Report, which adds some £40 million this year to labour costs, is taken into account. Obviously, a substantial reduction in central charges is essential if the Commission is to be put on a sound financial basis.

Apart from this, steps in any case must be taken early in the next session of Parliament to put the Commission's finances in order because the accounts indicate that during 1960 the remaining authorised borrowings for deficit financing are likely to be drawn on to such an extent as to leave little, if anything, for this year's deficit. Of the £400 million permitted to be borrowed from the Minister for this purpose under the Transport (Railway Finances) Act less than £120 million remains.

Far better than extending such borrowings would be to put an end to this most unsatisfactory form of financing with its deferred liability which rises annually at compound interest, at rates varying from 4½ to 5½ per cent. The accounts confirm that only with a reduction in its capital liabilities can the Commission pay its way. It is pointless to defer payment on them, as is now done, as that results in the

building up of an annual increase in borrowings and interest charges, and the carrying in the balance sheet of an unrealistic item in the form of the Special Account which was increased by £110 million last year and already totals over £400 million. This is made up of £370 million on account of deficits incurred since 1955 and some £48 million interest charge on deficits and borrowings.

There are other facets of the present financing which are equally unrealistic. For instance, at the same time as the Commission is borrowing from the Minister of Transport for capital expenditure, and for deficits, and for interest on both, it is making repayments to him on earlier borrowings to meet which further borrowing has to be resorted to, and probably at a higher rate of interest. Equally illogical is the fact that the Commission is required to contribute annually to a capital redemption account, on which interest must also be paid, and this too adds to central charges; last year £3½ million was allocated for this purpose *plus* over £1 million interest. This seems paltry when set against the more than £200 million additional borrowings last year, £1,443 million British Transport Stock outstanding, and the total of £600 million advanced by the Minister.

All in all, not only the capital position as it now stands, but also the whole basis on which the Commission's finances are dealt with, are unsatisfactory. Nothing short of a drastic reconstruction, which reduces its liabilities to a level that can be met out of earnings, will suffice to salvage the Commission from its present financial slough of despond.

### British Transport Commission Traffic Receipts

GOODS traffic receipts of British Railways during Period 6, the four weeks ended June 19, at £22,982,000 compare with £24,364,000 for the preceding period. The four weeks under review embraced the Whitsuntide holiday, though it might have been hoped that loss of traffic caused by the fewer working days would be offset as the result of more intensive commercial effort on the railways' part, and the reported greater efficiency in handling traffic. Because of the incidence of the holidays, and of the discrepancy between the dates in 1959 and 1960, of the statistical periods, no true comparison is possible between the years. For what the contrast is worth, it may be noted that British Railways total freight receipts for Period 6 was the only item, except coal class traffic, to show a drop compared with 1959.

Mineral receipts for Period 6 were £3,615,000, against £3,891,000 for Period 5. Merchandise receipts were £7,672,000, against £8,200,000. As regards coal class traffic, receipts for Period 6 were £7,384,000, compared with £7,893,000 for Period 5 of the current year, and with £8,017,000 for the roughly corresponding weeks of 1959.

	Four weeks to		Incr. or decr.	Aggregate for 24 weeks to		Incr. or decr.
	June 19, 1960	June 14, 1959		June 19, 1960	June 14, 1959	
<b>Passengers—</b>	£000	£000	£000	£000	£000	£000
British Railways ...	13,210	11,241	+ 1,969	62,682	57,646	+ 4,936
London Transport						
Road Passenger Services ...	4,554	4,336	+ 218	25,879	24,710	+ 1,169
Railways ...	1,959	1,796	+ 163	11,743	10,958	+ 785
Provincial & Scottish Buses ...	5,086	4,975	+ 111	26,276	25,787	+ 489
Ships ...	700	624	+ 76	2,193	2,132	+ 61
<b>Total passengers ...</b>	<b>25,509</b>	<b>22,972</b>	<b>+ 2,537</b>	<b>128,773</b>	<b>121,233</b>	<b>+ 7,540</b>
<b>Freight, Parcels &amp; Mails</b>						
British Railways—						
*Merchandise & livestock ...	7,672	7,545	+ 127	47,292	45,869	+ 1,423
*Minerals ...	3,615	3,239	+ 376	22,901	20,437	+ 2,464
*Coal & Coke ...	7,384	8,017	- 633	51,996	54,176	- 2,180
*Parcels, etc., by coaching train ...	4,311	4,129	+ 182	25,350	24,463	+ 887
*Total freight British Railways ...	22,982	22,990	- 8	147,539	144,945	+ 2,594
Others† ...	4,512	4,316	+ 196	25,911	24,796	+ 1,115
<b>Total freight, parcels &amp; mail ...</b>	<b>27,494</b>	<b>27,306</b>	<b>+ 188</b>	<b>173,450</b>	<b>169,741</b>	<b>+ 3,709</b>
<b>Total ...</b>	<b>53,003</b>	<b>50,278</b>	<b>+ 2,725</b>	<b>302,223</b>	<b>290,974</b>	<b>+ 11,249</b>

\*Includes receipts from collection and delivery

†Inland waterways freight, road haulage, and ships

No doubt the Whitsun holiday and some good weather



during the four weeks, swelled passenger traffics. The increases in British Railways, and in ships' passenger receipts over those for Period 5 are marked: £13,210,000 and £700,000 compared with £10,664,000 and £418,000 respectively.

For the 24 weeks, nearly half the year, to June 19, the total receipts from the carrying activities of the British Transport Commission at £302,223,000 compare with £290,974,000 in 1959. The corresponding figures for British Railways total freight traffic are £147,539,000 and £144,945,000; for merchandise, £47,292,000 and £45,869,000; and for minerals £22,901,000 and £20,437,000. This cannot engender much optimism, but economies in operating are being effected through greater efficiency and through use of new and improved equipment as fast as it becomes available.

#### PERCENTAGE VARIATION 1960 COMPARED WITH 1959

	Four weeks to June 19	24 weeks to June 19
<i>British Railways:</i>		
Passengers ... ..	+17.5	+ 8.7
Parcels ... ..	+ 4.4	+ 3.6
Merchandise & Livestock ... ..	+ 1.6	+ 3.1
Minerals ... ..	+ 9.5	+12.0
Coal & Coke ... ..	- 7.8	- 4.0
Total ... ..	+ 5.7	+ 3.7
<i>Ships (passengers) ... ..</i>		
	+12.1	+ 2.8
<i>British Road Services, Inland Waterways &amp; Ships (cargo) ... ..</i>		
	+ 4.5	+ 4.4
<i>Road Passenger Transport, Provincial &amp; Scottish ...</i>		
	+ 2.2	+ 1.8
<i>London Transport:</i>		
Railways ... ..	+ 9.0	+ 7.1
Road Services ... ..	+ 5.2	+ 4.7
Total ... ..	+ 6.2	+ 5.4
<i>Aggregate ... ..</i>		
	+ 5.4	+ 3.8

### Mineral Wagons of Light Alloy

THERE can have been few, if any, opportunities of getting to know what light-alloys could and could not do in wagon stock which could be compared to that presented at the recent Strasbourg exhibition, some details of which are given elsewhere in this issue. In particular, something of a practical education was given in the application and performance of aluminium alloys in mineral wagons of small and large capacity, for the dozen or so exhibits in this class were of all ages, from 13 years to one year old, and many had come straight out of traffic to Strasbourg, with the last load barely swept out of them. There was in no sense a gradual progression from the oldest wagon to the newest, either in the amount of aluminium used or in the tare: load ratio, for the wagons were from several builders in four countries. But it was obvious that while weight saving might be a principal claim for light-alloy stock, another of great importance must be the resistance to corrosion and consequent saving in repair costs.

Nowhere was this point more obvious than in the smallest exhibit—the British Railways 16-ton mineral wagon, which, thanks to the foresight and understanding of Mr. F. J. Pepper, had been brought over without any cleaning or touching up except clearing out the last load of coke. The comparative states of aluminium side, end and floor plates on one hand, and of the steel stanchions, door posts and framing on the other hand, were strikingly visible. One of a hundred such wagons built at Shildon in 1954, this vehicle, with plates of Al-Cu-Mg-Si alloy argon-arc welded, seemed to have suffered no corrosion at all in its light-alloy parts, even where these were joined to the steel members, which in six years showed appreciable rusting. Because of the softness of the material, there were numerous small local deformations in the aluminium plates, though these did not approach the cracking point, except that at one place on the side there was a tear caused by a passing load.

Exactly the same state was found in certain French coal wagons of high capacity after 5-10 years of service; but in one of these the original steel floor plate had been replaced by an aluminium one which, in its turn, had to be taken out because of damage resulting from the regular use of a grab in the unloading. About 400 wagons of this general type, with steel underframe and bogies and light-alloy bodies, are in service in France, and the 4-mm. Al-Mg 5 plates show a life at least three times that of steel plates. All the used wagons on show demonstrated unvaryingly this freedom from corro-

sion, and so interest can be transferred as to how far aluminium alloys may be used in construction. Certain wagons had aluminium in one form or another for everything except the wheel tyres, axles, springs, drawbars and screw couplings, brake blocks and certain standard air-brake details, and were able to provide carrying capacities of 62 to 64 tons, or 2,500 to 2,850 cu. ft., on an empty weight of 15 to 16.5 tons, giving a load/tare ratio well above 4 to 1. It was interesting to see wheel centres, buffers and even Athermos axlebox casings in light metal, and this type of construction was applied to both ordinary and hopper wagons; and not alone to coal wagons but also to those carrying sulphur, alumina and salt. Al-Mg 5 alloy was the favourite for practically all parts, but a practice seemed to have grown up in using aluminium-alloy rivets below 14 mm. dia. and steel rivets for that size and over. As to mileage, mineral wagons often make a comparatively short yearly distance, and some of the wagons on show had averaged no more than 20,000 miles a year over their six to 13 years of life. On the other hand, certain 60-ton bogie alumina wagons belonging to Pechiney are used regularly in intensive block-train service over long distance, and normally make a mileage of 90,000 a year, some of the wagons having built up totals of 750,000 miles in under nine years, and others over half a million miles in just under six years, in each case with a general revision once a year, but without any appreciable replacements in aluminium, most of the necessary work being connected with tyres and brake equipment.

From this brief review of light-alloy mineral wagons in Europe, one may turn for a moment to the U.S.A., where the Mayer Car Corporation is in course of delivering 455 covered hoppers with aluminium bodies, and Pullman Standard has just completed delivery of 750 light-alloy bogie coal cars of 47,300 lb. tare for a carrying capacity of 220,000 lb. In these last-named vehicles the whole car body and underframe are of aluminium except for the centre sill and a few parts welded to it, and the air brake components, and it is calculated that the car tare is about 75 per cent that of an all-steel car.

### The Southern Railway of U.S.A.

(By a correspondent)

THE Southern Railway Company operates 6,267 miles of road in the United States, stretching from Washington, D.C., Cincinnati and St. Louis to New Orleans and Mobile on the Gulf of Mexico. Long branch lines give it access to Norfolk and Charleston on the Atlantic coast and to Memphis on the Mississippi. Through component companies in which it has a large financial stake, the Southern brings 1,265 more miles of road under a common management. It also controls 633 miles of separately operated short lines, so that it is responsible for a total mileage of 8,113.

The Southern system is in a highly competitive region of the U.S.A. railroads serving the South Eastern states. There, 24 Class 1 railroads operate 37,390 miles of road and compete for traffic at many critical points. For example, the Louisville & Nashville, which likes to be called the Dixie Line, extends for some 5,700 miles from St. Louis and Cincinnati to the Gulf ports and strives for a share of traffic at centres like Atlanta and Birmingham. All the railroads have a stiff fight for traffic with road hauliers, carriers on the Mississippi and other inland waterways and coastwise shipping.

Amid this welter of competition the Southern moved 66,409,700 tons of freight last year for an average distance of 222 miles. Revenue ton miles totalled 14,700 million equal to the average for the last five years, and each ton mile earned 1.636 cents. With a wagon load of 32.5 tons, a net train load of 1,539 tons and a freight train speed of 17.7 miles an hour, the output of freight train working was 58,410 gross ton miles in a train hour—an advance of 8 per cent on 1958. The improved productivity may be due in part to the installation during 1959 of 23 diesel units of 2,400 h.p. and up-to-date design, which represent a substantial increase in traction power. As far back as 1953 the Southern was the first major railroad to get rid entirely of steam locomotives.

As on most American railways, passenger business on the Southern is shrinking. Last year passenger services were provided on only half of its mileage. They carried 1,151,800

passengers for an average distance of about 290 miles, running at an average speed of 36 miles an hour. Passenger miles of 341 million were down 9 per cent from 1958 and a fifth below the average for five years from 1955 to 1959. These figures furnish a fantastic comparison with the performance of the Southern Region of British Railways, in carrying 416 million passengers last year for an average journey of 16 or 17 miles, on little more than 2,000 miles of road.

Financially 1959 was a satisfactory one for the U.S.A. line. Operating revenues of \$272 million were \$15.5 million over 1958, an increase of 6 per cent. Freight revenue of \$240 million accounted for the increase; passenger revenue was down by nearly a tenth to \$10.5 million and was rather less than mail receipts. Operating expenses were reduced by \$2 million, or 1 per cent, without avoiding necessary maintenance, and the operating ratio fell from 69.1 per cent to 67.6. That was a noteworthy result as the operating ratio for all railroads in the Southern Region was 76.2 per cent, while the whole U.S.A. system operated at 78.4 per cent. After all charges the Southern earned \$33,126,744 last year, or \$4.65 per share of common stock compared with \$4.2 in 1958. The dividend per share was raised from \$2.52 to \$2.8 and 1960 began well, earnings before charges for January and February being 13 per cent higher.

One of the Southern's subsidiary lines, made a good showing last year. Though it bears the title of Cincinnati, New Orleans, and Texas Pacific, the line runs for 334 miles across Kentucky and Tennessee to Chattanooga, a busy exchange point. Using

locomotives composed on an average of 3.7 diesel units, this little railway moved a net train load of 1,753 tons at a speed of 24 miles an hour. The daily mileage of serviceable wagons was 76, compared with the general average of 46, and 99,608 gross ton miles were turned out in a train hour. Earnings before charges rose by \$877,000, or nearly 14 per cent, to \$7,185,000.

Another subsidiary railway, the Alabama Great Southern operates 328 miles in the industrial district, of which Birmingham is the centre. With a train speed of nearly 20 miles an hour and a net load of 2,315 tons, its hourly output of freight train operation reached 100,478 gross ton miles. Being hit hard by the steel strike, it worked only half the ton miles produced by the C.N.O. and T.P. line and earnings fell by 27.6 per cent.

These details of the Southern Railway's operations bring out the characteristics of American railroads. It is significant that illustrations of long freight trains, hauled by diesel locomotives at high speed even on steep grades, are a leading feature of many U.S.A. railway reports for 1959. The cover of the Illinois Central shows passengers boarding the Panama Limited in New Orleans and the "Main Line of Mid America" had an increase of a million in passenger revenue for the first time in a number of years. The total takings of \$22 million were, however, only a tenth of freight revenue and would entail a large passenger deficit. In 1957 the deficit was \$20 million, or 49 per cent of freight net operating income and the passenger operating ratio would be high last year.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Luxury Travel

June 28

SIR,—In the editorial note in your June 17 issue you state: "The last train to be so limited [to first class with a supplement] was the 'Golden Arrow' Pullman." In fact, the "Golden Arrow" was restricted to first class passengers for only a tiny portion of its existence. For most of its life it was restricted to upper class passengers, i.e. first and second, but conveyed no third class. The same applied to the "Hook Continental"; and also to the "Day Continental" during the period of the year when local passengers were excluded. These arrangements ceased when the number of classes was reduced from three to two.

The train which is a real *train-de-luxe*, first class only with supplement, is the "Night Scotsman," which since the East Coast night service was re-organised about two years ago has been first only in the northbound direction on six nights out of seven (Sundays to Fridays inclusive). On Saturdays it relents to the extent of carrying second class sleeping car passengers.

Yours faithfully,

G. H. HAFTER

49, Church Street, Isleworth, Middlesex

### London Midland Region's New Look

June 29

SIR,—In today's *Times* the London Midland Region announces that it is "a great national asset," giving "an unmatched door-to-door service": rather an odd claim to follow the admission that the Region could not move traffic from South Wales to the Birmingham district because of a shortage of staff. It is also common knowledge that for many months transits through the Midlands have been slow.

The advertisement states that 600 express freight trains run every weeknight at passenger train speed. They have not done much to quicken the average freight traffic movement in the London Midland Region. In 1958 that was just on 9 m.p.h. for steam trains and less than 6 m.p.h. for a few diesel-hauled freight trains. In 1959 the steam trains did not go any faster and were the slowest in the country; the diesel-hauled trains moved at less than 7.5 m.p.h. compared with an all-line average of nearly 9.

In 12 weeks to March 27, London Midland steam freight trains progressed at 8.5 m.p.h.—again the lowest figure for

any Region—and diesel-hauled trains went forward at nearly 7 m.p.h. compared with an all-line average of 10.

As for the "Condor," giving an overnight delivery from London to Glasgow, before the 1914-18 war the East Coast companies ran a fast freight train in mid-afternoon from Kings Cross, which picked up vegetables at Biggleswade and Sandy, so that they could be served at dinner in Glasgow the next night. An East Coast cartage staff was maintained to ensure that there was no delay in delivery. The importance of door-to-door service was no recent discovery, and the East Coast companies did not promise anything that they could not perform!

Yours faithfully,

R. BELL

Clacton-on-Sea, Essex

### Diesel and Electric Traction

June 26

SIR,—If all aspects of American railroad operation were as efficient as their production of statistics they would have little to fear from competition.

Your correspondent quotes figures in your June 24 issue to show what wonderful improvements are being effected in such matters as train loads, speeds and ton miles per train hr.; but it is perfectly obvious that whatever part is played by efficiency, the two major factors in the change are the falling-off in higher-rated traffic and the ability of the operating staff to couple anything up to eight diesel units and work them in multiple at the head of an enormous train.

That the economic absurdity of this is at last being appreciated is shown by the efforts being made to produce units of higher power. You illustrate one such on page 736 of the same issue, the most powerful yet built in the U.S.A. This machine, with a very highly boosted engine of 2,500 h.p., compares poorly with the Deltic of 3,300 h.p. on a lower weight; but the point is that what you describe as a two-unit locomotive of 5,000 h.p. is, in fact, a locomotive of about 4,200 h.p., the sort of power which European electrical engineers have been putting on four lightly loaded axles for years, and the machine with a weight ratio of 232 tons to 78 would have little, if any, better performance than our own 25-kV. locomotive.

Yours faithfully,

L. IRVINE-BROWN

Ivydene, Tilston, Malpas, Cheshire



## THE SCRAP HEAP

### Tact at Charing Cross Hotel

While the British and French Governments continue to mull over the three-months-old report of the Channel Tunnel Study Group, the Group continues its work. Recently it met at the Charing Cross Hotel, in the "Thames Room." This was a tactful gesture by the management, as the head of the French side, Monsieur René Massigli, the former French Ambassador in London, had expressed his fears that the meeting would be arranged in the "Nelson" or "Trafalgar" rooms which are also available at this hotel. — From *"The Financial Times."*

### Between the Lines

A young man, who works in the coal mines of Gilly, near Charleroi, lately made a bet of a few glasses of beer, that he would lie down on the railway, and let a train pass over him. He performed his mad freak a few days ago, placing himself lengthways in the middle of the line between the rails, making himself as small as possible. He won his bet, but at the expense of a severe burn on the back of his neck from a piece of lighted coke falling on him, added to which he will be brought before the Correctional Police for his imprudence.—From *"The Engineer"* of May 25, 1860.

### Caravans at Trainless Stations

A valuable solution from Yorkshire to the problem of finding sites for holiday caravans has lately been put forward by the Stokesley Rural Council. The Council suggested that suitable places for such sites might be the railway stations of the many branch lines that have been closed in recent years. Almost invariably these lines run through thinly populated rural areas, and therefore the location is the pleasant kind of country scene that many caravanners desire. The stations are generally equipped with water supplies and sanitary conveniences and access to them is easy. The proposal has engaged the interest of the North Yorkshire Moors National Park Planning Committee. If the suggestion proves practical . . . it will mean that at least some caravans that might otherwise be parked in inappropriate places will be sited where they can create no annoyance.—From *"Country Life."*

### Serving Schools

(See our April 1, issue)

The recent withdrawal of passenger services from the Seaton-Uppingham branch of the London Midland Region is mentioned in the May edition of the *Uppingham Association & School Society Leaflet* "Only at the beginning and end of term" it is stated "will the line carry passenger traffic on its 1-in-60 gradient . . . but British Railways insist on saying that it will run a special train on Speech Day, which we feel must be a confusion: who ever heard of a parent using Uppingham Station in these days on Speech Day? Through all its life of nearly 66 years the

story has been current . . . that the School did its best to prevent the line being built, and that Edward Thring [the headmaster] used his influence to this end. Recent research suggests that . . . in 1886 Thring was chairman of a committee for the promotion of the railway. He had noted in his diary as far back as 1860: 'Some talk of railway to Uppingham' . . . What the 1894 [school] *Magazine* called the 'pretty little station' (which hasn't been painted since 1937) will now be open for goods traffic only except on some seven occasions in the year."

### The Channel Tunnel (1886)

To those who read the editorial note entitled "Early Decision Needed on Channel Tunnel" in our July 1 issue, it may be of interest that a start was actually made on the project in 1882, and an experimental gallery was successfully cut for 2,160 yards under the sea at Shakespeare Cliff before the workings were closed down by order of Mr. Joseph Chamberlain, then President of the Board of Trade. Feelings ran high about this decision, and Messrs. E. Watkin and W. L. Meredith of the Institution of Permanent-way Inspectors wrote to the editor of *The Railway Engineer* (1886) remarking that "Individuals called upon to govern their fellow men . . . are, with very few exceptions, arbitrary and iniquitous," and that they, the writers, had certainly "realised the truth of this in the case of Mr. Chamberlain." They claimed that the tunnel would make a "golden band" of union between France and England, through an exceptional plain, under the sea of God's own formation; and knowing that aforetime England and France were part of

the same unvaried surface, we tell our prejudiced and uninformed opponents that they are on the horns of this dilemma. Either Providence made a mistake in originally uniting the two countries, or, we are right in trying, in these days of advanced civilisation, to reunite that which was originally one."

### Railway over Peat Bog

A correspondent states that Francis DuBourdieu, of Innismore, Co. Armagh, and Jasper Rogers, Inspector of the Irish Ameliorations Society works in Co. Kildare, devised a method of building light railways over Irish peat bogs. This consisted of laying slabbing from round timber on the flat on the bog surface and then crossed-slabbled to a depth of 2 ft. Sleepers were spiked down on the slabbed road bed and the rails laid in the usual way. One mile of this track over a soft bog was laid in Co. Kildare in 1860 at a cost of £498. When a narrow-gauge locomotive and wagons passed over the line there was considerable "bobbing," but the track was in use for more than ten years.

### Live Publicity

A new carnival float built for the Public Relations & Publicity Department of the Southern Region, British Railways, has been entered for a large number of holiday carnivals this summer. The float is designed to represent the new Southern Region multi-unit electric trains. The model is Miss Ronnie Shipman, aged 19, of Bromley, Kent. The float has already taken part in carnival processions at Caterham and Warringham, where, on its first public appearance, it won a cup as first prize in the National Trades class; and at Eastbourne.



Southern Region carnival float with front end representing new multiple-unit electric trains

## OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

### SOUTH AFRICA

#### Radio Telephony

Long distance v.h.f. radio telephony has been successfully used between Durban and Estcourt in Natal to supplement the usual overland channels and has been of considerable value in cases of interruption to the overland lines. This information was contained in a memorandum presented by the South African Railway Administration to the recent conference in Johannesburg of General Managers of Railways in Southern Africa. Radio telephony has also been successfully tried between Springs and Johannesburg, chiefly to control the heavy coal traffic from the Transvaal coalfields. It was now proposed to extend the system along the Natal main line. It was further explained that radio had proved effective between fixed stations and mobile units. Cartage vehicles as well as floating craft in harbours were being successfully controlled.

### ANGOLA

#### Motor Launch by Rail

A 40-ft. motor launch, intended for service on Lake Tanganyika by the Government of the Congo, was recently shipped from the United Kingdom by way of the Port of Lobito, the fast route to the Congo and Northern Rhodesia. The twin-screw launch, constructed of aluminium alloy, was built for the Congo Government by Universal Shipyards (Solent) Limited, at its Salisbury Green yard on the Hamble River. It was shipped from London on the *Clan Mackinnon*, and on arrival at Lobito was loaded on a Benguela Railway well wagon.

On the first stage of its 2,000-mile journey from Lobito to Albertville, on the shore of Lake Tanganyika, the launch was

carried on the Benguela Railway and Bas Congo-Katanga Railway as far as Bukama, 1,450 miles. As it was too wide to cross the railway bridge at Bukama, it had to be transferred to a barge for transit by river to Kongolo (404 miles), when it continued its journey by the Upper Congo-Great African Lakes Railways to Albertville.

The launch has an 11-ft. 6-in. beam with a draught of 2 ft. 9 in. The hull is of riveted construction, of aluminium alloy plates supplied by British Aluminium Co. Ltd. Twin Perkins P.6 diesels, developing 65 b.h.p. give the required service speed of 12 knots.

### EAST AFRICA

#### Pay Increase for Kenya Railwaymen

The Railway African Union of Kenya has accepted the same pay terms for employees at present in the service as those recently awarded to Group 'C' staff in Uganda and Tanganyika which will be effective from May 9, the same as in Uganda. The agreement was signed in the office of the conciliator, Mr. W. R. C. Keeler, Labour Commissioner, by the Chief Establishment Officer of the East African Railways & Harbours, Mr. R. L. Rolph, and the Acting President and General Secretary of R.A.U. of Kenya, Mr. P. J. Muinde and Mr. J. B. A. Ohanga. Like the Tanganyika and Uganda agreements it also makes provision for a commission of enquiry into industrial relations.

### AUSTRALIA

#### Wheel Profiling Operations

The performance of the Atlas Engineering Company's first wheel profiling production unit which was purchased by

the Commonwealth Railways last year and installed in the Port Augusta Workshops is reported to have been highly satisfactory.

Since wheel profiling operations commenced at Port Augusta, the plant has operated for 16 hr. a day for five days a week. Figures taken out by the C.R. have indicated that over a period during which 1,000 axle sets were machined, the average cost per set was £3 6s. 7d. This means that the all-inclusive cost of re-profiling the tyres of a six-axle diesel-electric locomotive is just under £20. It is anticipated that these costs will be reduced in the near future.

Mr. H. N. Turner, the Acting Secretary of the Commonwealth Railways, has commented that the installation of the Atlas wheel truing machine has enabled large savings to be effected in the turning of diesel-electric locomotive wheels and has made possible the maintenance of a high standard of wheel profile. Another advantage has been the marked increase in the availability of locomotives and rolling stock due to a reduction in the time that vehicles spend in the workshops.

### CHINA

#### Freight Carried in 1959

Freight carried by the Chinese railways during the year 1959 is reported to have totalled 542,000,000 tonnes. This is over twice the tonnage carried by British Railways.

### ITALY

#### Accompanied Motorcars

Trains carrying motorcars accompanied by passengers are running this summer between Rome and Milan and Rome and Bolzano, in South Tyrol. Special two-tier motorcar wagons have been placed in service.

#### Passenger Train Accelerations

The summer timetables include a run from Rome to Naples Mergellina (130 miles) in 100 min., and there are several runs in both directions in a little over that time. These and other accelerations, such as between Milan, Florence, and Rome, are stated to have been made possible by introduction of more powerful electric locomotives.

### SWITZERLAND

#### Zurich-Chur Main Line Doubling

Completion of the 2½ mile Kerenzerberg tunnel, between Ziegelbrücke and Mühlehorn, which was brought into use on April 28, is part of the scheme for doubling the only stretch of the Zurich-Chur main line west of Ragaz that still remains single.

Single track still remains from Ziegelbrücke through Weesen to Gäsi, near the western tunnel entrance, as well as from Mühlehorn on to Murg. To eliminate the former, work has begun on a new



*Motor launch loaded on a Benguela Railway well wagon en route from Lobito to Albertville on Lake Tanganyika*



double track crossing the Linth Canal (the outflow from the Walensee) just east of Ziegelbrücke, then keeping south of the latter and crossing the curved location of the present single track three times before reaching the tunnel. A new station will be built on the south side of the canal to serve Weesen. Doubling the short stretch of line from Mühlehorn to Murg will complete the scheme. The whole of this double line, which will permit considerably higher speeds, should be in use by 1962.

## FRANCE

### Transfer of Hand Baggage in Paris

Holders of through tickets *via* Paris can now avail themselves of the new "deposit-transit" service for transfer of hand baggage between Paris termini. The charge is N.F.2 per article. Baggage is handed in at the cloakroom at the station of arrival and collected from the cloakroom at the departure station.

### Paris Suburban Traffic

S.N.C.F. suburban traffic in the Paris area amounted to 358,000,000 passengers in 1958. It was estimated recently that it would be 580,000,000 in 1970. The total length of the French National Railways suburban lines is now some 600 miles, of which 270 is electrified and 135 in course of electrification. Electrification of all lines scheduled for conversion is to be completed by 1970. Although this will increase line capacity, the problem will remain of handling traffic at termini. In 1970, 110,000 passengers are expected to be handled between

6 and 7 p.m. on weekdays at the St. Lazare terminus of the Western Region, compared with 70,000 in that period at present. As the capacity of the station cannot be increased, and as the Métro and buses serving it already are overcrowded, serious difficulties will arise. One solution proposed is construction of deep-level underground lines beneath the centre of the city, connecting with the S.N.C.F. suburban lines. Reference to one of these, a west-to-east link beneath the existing Métro line from Neuilly to Vincennes, was made in our January 22 issue.

## AUSTRIA

### Doubling of Main Lines

Doubling of certain sections in Carinthia of the Vienna-Klagenfurt-Villach (-Venice-Rome) main line has resulted in improved operation. This is also expected as a result of doubling between Lauterbach and Bregenz, in Vorarlberg. Because of the mountainous nature of the terrain and of the high cost, it is not considered practicable to lay a continuous second track on the Arlberg main line between the Swiss frontier and Innsbruck. Some relief to congestion on this line will be afforded by work now in progress, which includes lengthening running loops.

### Avalanche Warning Device

The Federal Railways are installing an automatic warning system for protection of the Arlberg line against avalanches. Instruments installed at an altitude of 6,500 ft. record air temperature and wind force. Data are trans-

mitted and recorded automatically at the Spullersee power station, where the probability of avalanches is assessed. The avalanche warning service, which includes railway operating and civil engineer's headquarters, stationmasters, and so on, then transmits warnings to those concerned, according to the location of the expected fall. Additional protective measures include snowsheds and retaining walls.

## WESTERN GERMANY

### Level Crossing Warnings

The Federal Railway has replaced the old warning light indications at level crossings by flashing light signals. Views of tracks and roadways have been improved at many places. Some 460 crossings were replaced, last year, by bridges or underpasses, or were abolished altogether. The number of level crossing accidents in 1959 was nearly 8 per cent less in the previous year.

## JUGOSLAVIA

### New Standard-gauge Line

A new standard-gauge line, 31 miles in length, has been opened from Titograd via Virpazar to Bar, on the Adriatic coast. The line skirts the western end of Lake Scutari, and replaces two narrow-gauge sections formerly linked by a steamer service across the lake. Although designed to form the terminal portion of a new standard-gauge through route from Belgrade to the coast, the Titograd-Bar line is at present isolated from other standard-gauge sections.

## Publications Received

*Glossary of Railway Terms: English-French-German-Italian-Spanish-Swedish.* Compiled by Jean Herbert. Published under the auspices of the International Union of Railways by the Elsevier Publishing Company. London: D. Van Nostrand Co. Ltd., 358, Kensington High Street, W.14. 7½ in. x 5½ in. 413 pp. Paper covers. Price 30s.—Three years ago the International Union of Railways (U.I.C.) published its "Dictionary of Railway Terms" in French, English, German, Italian, and Spanish, French being the master language. Nearly 9,000 terms were included in the "Lexique General" and they covered every aspect of railway management and working. The work was intended primarily for use in railway offices. It was then suggested that a smaller dictionary, limited to some 2,000 terms, would be of great help to those faced with the translation of railway terms at international meetings at Government level, such as the United Nations, Council of Ministers of Transport, and so on. By arrangement, and with the co-operation of the U.I.C., Monsieur Jean Herbert, an interpreter of the United Nations, undertook the work of selecting 2,000 terms, and arrangements were made to add a sixth language, Swedish, with the co-operation of the

Swedish State Railways. The "Glossary of Railway Terms" is the result of M. Herbert's work. Care has been taken to add certain American terms besides those more familiar to railwaymen in Britain, the British Commonwealth, and other countries following British practice.

*Hydraulic Oils.* London: Wakefield—Dick Industrial Oils Limited, Castrol House, Marylebone Road, N.W.1. 8½ in. x 5½ in. 74 pp. Illustrated with drawings and diagrams. Obtainable free on application.—The subject is dealt with concisely but comprehensively, in five chapters: historical development; fundamental principles; hydraulic pumps and motors; components of hydraulic circuits; and hydraulic fluids. The last four are sub-divided into sections on various subjects, reference to which is facilitated by a clear list of contents. The value of the book is enhanced by the 50 illustrations. It will help all concerned with the design, installation, operation, and maintenance of hydraulic equipment. Students should find the many graphs and formulae very useful.

*S.N.C.F. General Information, 1960.*—The illustrated booklet in English, issued by French Railways Limited, 10, Haymarket, London, S.W.1, gives full information on passenger tickets, reservations,

conveyance of baggage, passport and customs controls, transport of motorcars, and self-drive hire cars, on the French National Railways. A sketch map shows the progress of electrification up to June, 1960, and the electrification programme for 1960-64. Accommodation in first and second class side corridor compartments, *couchettes*, sleeping cars, a "vistadome" in an observation railcar, and a saloon in a "Trans-Europe" diesel train, are shown in well-reproduced photographs, as are the telephone in a Paris-Lille express, and loading of motorcars on to the two-tier wagons of a car/sleeper train.

*To France by Car Ferry from Dover.*—A folder produced by the Publicity Department of the Southern Region, British Railways, gives particulars of the facilities for conveyance of motorcars between Dover and Boulogne, Calais, and Dunkirk by ships of British Railways and the French National Railways. The coloured cover design is gay and attractive. Photographs reproduced in monochrome depict the accommodation on board for motorcars and their drivers and passengers. Reference is made also to car/sleeper services: Manchester-Dover, Newcastle-York-Dover (in connection with Dover-Boulogne sailings); Boulogne-Lyons; and Paris-Avignon.

## British Transport Commission Results for 1959

*Railway deficit reduced by £6,000,000 and largest surplus yet recorded on other undertakings. Gains through economies and modernisation*

ALTHOUGH there was still a loss, the results of the British Transport Commission for 1959, as given in the annual report and accounts show a substantial improvement over the previous year. The working deficit on British Railways was reduced from £48,100,000 in 1958 to £42,000,000, and the working surplus of the other undertakings rose from £20,000,000 to £29,400,000. The latter is the best result achieved in the history of the Commission. The total working deficit for the undertaking as a whole was £12,600,000 compared with £28,100,000. The results for the several activities are shown in the accompanying tables.

### Railway Working Expenses Reduced

Working expenses of British Railways, reduced by £20,300,000, were only a little higher than in 1956, despite rises in price and wage levels during the three years. The savings are stated mainly to have reflected the search for greater efficiency and the benefits of modernised equipment, but also to be the result partly of the lower level of freight traffic. Although the number of passenger journeys was fewer by 2 per cent, passenger miles increased.

The loss of £42,000,000 on British Railways, plus a similar sum for financial charges, was transferred to the special account under the arrangements for deficit financing laid down by Parliament.

	Net receipts Year 1959	Better (+) or worse (-) than 1958
	£ million	£ million
<i>Principal carrying activities:</i>		
British Railways (including C. & D. services) ... (deficit) ...	42.0	+ 6.1
British Road Services ...	3.1	+ 1.2
Provincial and Scottish Buses ...	6.6	+ 0.6
<i>London Transport:</i>		
Road ...	4.0	+ 4.8
Rail ...	2.0	- 0.6
Ships ...	3.9	+ 1.5
Inland Waterways: carrying (deficit) ...	0.2	—
Total: carrying activities (deficit) ...	22.6	+ 13.6
<i>Other principal activities:</i>		
Docks, Harbours & Wharves ...	2.8	+ 0.6
Inland waterways: tolls, etc. (deficit) ...	0.7	- 0.1
<i>Hotels and catering services:</i>		
Hotels ...	0.4	+ 0.3
Refreshment rooms ...	0.5	+ 0.1
Restaurant cars (deficit) ...	0.5	+ 0.2
Letting of land and buildings not in operational use ...	4.7	+ 0.7
Total: other principal activities ...	7.2	+ 1.8
Miscellaneous activities ...	2.8	+ 0.1
Working deficit ...	£12.6	+ £15.5

The net surplus of £10,100,000 in respect of the other activities, compared with only £1,000,000 in 1958, was carried to net revenue account. The report states that this is "a most gratifying outcome to which all the principal activities, other than inland waterways, contributed." It adds that the improvement in British Railways would have been more pronounced if the revival of the heavy industries on which the railways largely depend for goods traffic receipts had not lagged behind the improvement in the rest of industry.

### More General Merchandise Carried

The demand for coal and coke continued to decline and railway receipts from this traffic again fell considerably, though the proportion carried by rail increased slightly. Efforts to obtain more general merchandise traffic had made encouraging progress in 1959, the first year for a long time to show increased carryings of this class of traffic by rail. At the end of the year, trends in both minerals and general merchandise traffic were firmly upward. Despite difficulties such as staff shortages in some areas, the Regions of British Railways had gone close to achieving the targets which the

### BRITISH TRANSPORT COMMISSION: CONSOLIDATED BALANCE SHEET AT DECEMBER 31, 1959

December 31, 1958		December 31, 1959	
£	£	£	£
4,800,000	Current Liabilities—	10,011,690	Current Assets—
93,844,169	Bank advances ...	65,856,174	Bank balances and cash ...
18,628,406	Creditors and accrued expenses ...	20,508,600	Marketable securities (market value £581,617) ...
117,272,575	Interest (less income tax) accrued on capital liabilities ...	125,688,368	Outstanding traffic accounts ...
			Other debtors and payments in advance
			Stores and materials ...
		222,803,229	
43,722,981	Deposits—		Investments in respect of British Transport Stock Redemption Fund Accounts (market value £39,330,458)
113,645,569	Staff savings banks ...		
157,368,550	Staff superannuation funds ...	164,236,471	36,489,679
113,954,894	Provisions—		Fixed Assets and Goodwill on bases indicated in supporting statements and notes on accounts
15,302,090	Retirement Benefits ...	10,040,740	Interests in non-controlled undertakings ...
5,520,353	Taxation ...	5,446,842	Interests in subsidiary companies not engaged in the principal activities of the Commission ...
134,777,337	Internal insurance ...	1,097,438,874	Rolling stock, vehicles, ships and plant and equipment ...
		434,989,562	Deduct depreciation account ...
1,443,555,325	Capital Liabilities—	662,449,312	
	British Transport Stock ...		Land, buildings, permanent way, docks, canals and other works ...
	Advances by the Minister of Transport under Acts other than the Transport (Railway Finances) Act, 1957, as amended ...	1,236,691,719	Deduct maintenance equalisation account ...
212,680,000		228,309,516	
191,158,267	Under the Transport (Railway Finances) Act, 1957, as amended	1,008,382,203	
1,847,393,592		42,138,910	Goodwill ...
		1,728,458,007	
36,948,371	Capital Redemption Accounts		Discounts less Premiums on Issue of British Transport Stock, less amounts written off ...
			Special Account established pursuant to Section 3 of the Transport (Railway Finances) Act, 1957 ...
	Net Revenue Account—		
8,791,641	Surplus for years 1956 to 1959 in respect of Activities other than British Railways ...	18,928,362	
2,302,552,066		2,533,888,274	2,302,552,066

Note. Estimated further expenditure on Capital Account authorised at December 31, 1959: £331,000,000.

BRIAN H. ROBERTSON  
J. BENSTEAD  
REGINALD WILSON

Chairman  
Deputy Chairman  
Member



## CONSOLIDATED WORKING RESULTS OF PRINCIPAL ACTIVITIES OTHER THAN CARRYING

Supporting statement	Docks, harbours, and wharves	Inland waterways : other than carrying operations	Hotels and Catering				Letting of land and buildings not in operational use	Grand Total
			Hotels	Refreshment rooms	Restaurant cars	Total		
VI-9	VI-10		VI-11				VI-12	
	£	£	£	£	£	£	£	£
Gross receipts ... ..	21,777,795	2,706,254	8,028,023	10,427,363	4,284,656	22,740,042	7,492,331	54,716,422
Working expenses ... ..	19,010,467	3,401,952	7,633,444	9,929,455	4,766,821	22,329,720	2,779,294	47,521,433
Net receipts ... ..	2,767,328	695,698 (deficit)	394,579	497,908	482,165 (deficit)	410,322	4,713,037	7,194,989
YEAR 1958								
Gross receipts... ..	21,015,172	2,675,027	7,504,127	10,296,996	4,148,781	21,949,904	6,898,787	52,538,890
Working expenses ... ..	18,847,724	3,316,593	7,377,032	9,901,666	4,807,750	22,086,448	2,886,499	47,137,264
Net receipts ... ..	2,167,448	641,566 (deficit)	127,095	395,330	658,969 (deficit)	136,544 (deficit)	4,012,288	5,401,626

Commission had set them at the beginning of the year.

British Road Services increased the tonnage carried in 1959 by 6 per cent, in the face of growing competition. The Commission's ships carried more of every class of cargo except livestock. Despite the decline in coal movement, for which many docks were originally laid out, revenue from the docks equalled their highest previous level. The position as to the inland waterways did not change materially.

Passenger traffics were "surprisingly good" in view of the accelerating growth of private transport. Passenger miles on British Railways were higher, and, helped by the fine summer, Tilling and Scottish buses maintained traffic at about the 1958 level. Although London Transport Executive traffic recovered partly from the effects of the 1958 bus strike, L.T.E. was hindered by limitations outside its control such as road traffic congestion.

#### Decentralisation of Management

The Commission continued in 1959 with the evolution of the administrative structure. Such evolution, the report states, in the most favourable circumstances and granted continuous official support, would normally take some years before a well-balanced organisation is obtained, combining autonomy in day-to-day management in all the operating divisions and associated companies with a measure of central policy control. In carrying forward, stage by stage, this process of decentralisation, the Commission claims to have benefited greatly from the very wide experience of large-scale business organisation and of labour relations which the 40 or so part-time Members of the Commission and the Area Boards have contributed.

Mention is made of the further improvements at the highest level of administration and management introduced from January 1, 1960, including the new Traffic Committee to promote new or improved services and increased operational efficiency. The new system of traffic management on British Railways is stated to have settled down well, and in five Regions, with organisational variations in each case, is now functioning at full strength. The Commission claims to have gone as far ahead in the mechanisation of office work, including the use

of electronic equipment, as any other industry in the country.

In approving further orders for diesel locomotives, the Commission adopted a programme for standardisation and a reduction in the number of types and makes. In future, the standard types will be concentrated in particular Regions to simplify maintenance. The report states that despite "a few teething troubles with newly-delivered locomotives, which gave rise to some adverse publicity, the Commission feels well satisfied with the performance of its new main-line diesels, both those built in their own shops and those supplied by industry. Early troubles were associated mainly with accessories such as train-heating boilers, which have proved especially troublesome."

#### Railway Electrification

Reference is made to the completion on schedule and inauguration on June 15, 1959, of the Southern Region Kent Coast electrification at 750-V. d.c. third rail, between Gillingham and Ramsgate, Faversham, Canterbury East and Dover Marine; and the Sheerness branch. The travelling public, it is stated, has quickly responded. Over the second and final phase of this major electrification, embracing the lines from Maidstone East and Sevenoaks to Folkestone, Dover and Ramsgate via Ashford, a total of 132 route miles, work is proceeding with a view to completion by June, 1962; it is hoped, however, to introduce some electric running in the second half of 1961. The extension of electrification in the Central and Western Sections of the Southern Region is still in the planning stage.

In the first stage of the London Midland Region 50 cycles a.c. electrification between Euston, Liverpool and Manchester, the overhead line equipment between Wilmslow and Sandbach was made live in the late summer of 1959 for trial running and for training. Wiring in the Crewe station area was completed; this involved over 80 single track miles of overhead equipment in one of the most complicated areas on British Railways. The whole of the wiring was installed and adjusted in 7½ months—three months under schedule. Electrification of the Crewe-Manchester section is scheduled for completion by the autumn of 1960. A major task has been reconstruction of

bridges to give the increased clearance required for the catenary, and this has caused interruptions to services. Between Crewe and Manchester all bridge reconstruction was completed during the year. In November, the first a.c. electric locomotive was received from the manufacturers for trial running.

Originally undertaken for further proving of the 25-kV. a.c. system, the electrification of the Colchester-Clacton-Walton line was completed in 1959, public services being introduced in March.

The conversion of the existing electrified lines from Liverpool Street and Fenchurch Street to Chelmsford and Southend (Victoria) from 1,500V. d.c. to 25kV. a.c. made good progress, and a start has been made on closing the gap between Colchester and Chelmsford. During 1959 the installation of the overhead equipment on the Liverpool Street-Enfield-Chingford-Hertford East-Bishops Stortford lines advanced according to plan and some 70 per cent of the overhead wire was run out. Conversion of the London, Tilbury & Southend Line progressed well.

The Commission and the Regions concerned are reported to be studying the eventual electrification of the East Coast main line, and also the continuation of the West Coast main-line electrification through to Glasgow. The policy in the meantime, it is stated, has been to press on with electrification of heavily trafficked suburban lines and to give priority to early completion of the London Midland main line scheme.

#### London Transport Executive

Travel on L.T.E. buses was higher than in 1958, but when allowance is made for the 1958 strike, it appears that the gradual downward trend of recent years continued.

On the Underground railways travel has been more stable in total over recent years, though the average length of journey has tended to shorten.

Mention is made of work on extension of electrification from Rickmansworth to Amersham and Chesham, on the reconstruction of Notting Hill Gate Station, and on preparations for building the Victoria Line. Other L.T.E. activities during 1959 included operational research on provision of non-smoking accommodation. A start was made on

## CONSOLIDATED WORKING RESULTS OF PRINCIPAL CARRYING ACTIVITIES

Gross Receipts: Passenger Freight (including parcels and mails) Miscellaneous (including letting of sites and premises on properties in operational use (net) and commercial advertising (net)) Total Percentage of grand total—Year 1959 Year 1958	Passenger and freight services on British Railways	C. & D. and other road freight British Railways		Road haulage by British Road Services		Road passenger services of provincial and Scottish groups		London Transport services		Ships: passenger and freight services		Inland Waterways: carrying operations		Grand total
	£	£	Per cent	£	Per cent	£	Per cent	£	Per cent	£	Per cent	£	Per cent	£
177,394,629	140,034,878	11,822,543	36	22,986,729	47	37,917,824	68	8,370,822	36	5,268,187	37	315,982	29	298,793,285
102,208,818	307,443,435	4,430,305	23	8,332,896	17	9,833,435	18	3,811,944	16	3,211,928	22	236,213	20	141,095,522
34,037,819	9,944,435	1,455,409	7	9,825,293	20	3,832,568	7	5,011,096	22	4,783,665	33	314,829	29	110,961,559
75,455,659	457,422,748	114,909	1	652,938	1	1,041,184	2	1,561,550	7	16,284	—	80,899,436	12	35,594,654
19,223,350	68	577,115	3	985,464	2	604,447	1	2,856,104	12	1,121,432	8	152,473	14	2,738,156
490,374,519	70	1,207,671	6	6,635,329	13	2,130,330	4	1,679,551	7	14,401,496	100	61,109	6	35,227,239
19,365,840	100	19,611,954	100	49,418,649	100	55,359,788	100	23,291,067	100	14,401,496	100	1,080,606	100	705,313,851
509,740,359		19,365,840		49,418,649		55,359,788		23,291,067		14,401,496		1,080,606		705,067,737
10,347,424		—		3,126,316		6,570,341		2,032,827		3,881,800		215,074 (deficit)		10,347,424
499,392,935		—		49,418,649		6,570,341		2,032,827		3,881,800		215,074 (deficit)		694,720,313
41,970,187 (deficit)		—		3,126,316		6,570,341		2,032,827		3,881,800		215,074 (deficit)		22,577,053 (deficit)
109		—		94		89		92		79		125		103
471,605,277		49,473,617		49,473,617		61,046,131		25,729,829		16,644,539		928,593		674,633,622
519,691,806		47,501,280		47,501,280		55,084,467		23,132,462		14,299,805		1,124,225		710,807,472
48,086,529 (deficit)		1,572,537		1,572,537		5,581,664		2,597,367		2,344,734		195,632 (deficit)		36,173,850 (deficit)
110		—		96		90		90		86		121		105
471,605,277		49,473,617		49,473,617		61,046,131		25,729,829		16,644,539		928,593		674,633,622
519,691,806		47,501,280		47,501,280		55,084,467		23,132,462		14,299,805		1,124,225		710,807,472
48,086,529 (deficit)		1,572,537		1,572,537		5,581,664		2,597,367		2,344,734		195,632 (deficit)		36,173,850 (deficit)
110		—		96		90		90		86		121		105

NOTE: The classification of working expenses under the main heads shown above, while broadly uniform, differs to some extent as between one activity and another

replacing out-dated rolling stock on the Piccadilly and Circle Lines.

## Research

Approval was given in 1959 to the construction of new laboratories at Derby. It is hoped to start the building this year. Civil and mechanical engineering problems were also studied at Mousehole Tunnel, on long-welded rails, at the railway laboratories at Bishopsgate, and at Swindon. The new chemical laboratories at Muswell Hill were completed early this year.

The effect on the track and on bridges of the new diesel and electric locomotives has been the subject of long-term research, including the behaviour of the rail steel, and has yielded important results. The influence on the track of unsprung motors in diesel and electric locomotives has been studied and may prove to be less serious than was originally thought. The exact reasons why certain types of bogie used in modern vehicles ride well and others not so well has also been the subject of basic study. A new bogie developed at Swindon Works is reported to be showing great promise.

As regards the vacuum brake, improvements have resulted in a somewhat quicker release time. The Commission has authorised funds for the development of a suitable disc brake, involving reduced maintenance costs. On couplers and buffers, an intensive year's work has been devoted to testing these components. More extensive trials of one design of automatic coupler are planned for 1960. A cheaper alternative, the report states, may be the Instanter coupling, a strengthened form of which, on test, gave satisfactory results for freight trains run at Class "C" timings.

## Digital Computer

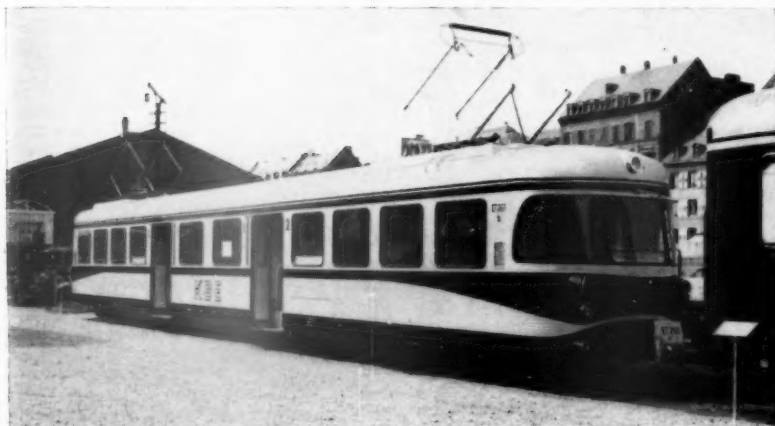
The digital computer at Derby was engaged on some complicated scientific problems during the year, including structural analysis in connection with the design of new bridges and of carriage under-frames. It was also used on train timing problems and for the analysis of "rollability" trials intended to improve the design of marshalling yards. With the ultimate object of replacing the present d.c. traction motors by a.c. motors in the locomotives working on the new 25-kV. a.c. electrifications, the use of power-controlled rectifiers as the basis for a new control to replace the present electro-mechanical contactor gear is being studied. If successful, this will remove the difficulties associated with commutators and lead to saving in the cost and possibly the weight of electric locomotives.

Lineside equipment with photo-electric cells is now being engineered, which will register and transmit the numbers on identification plates fitted to passing wagons. Field trials may start this year. The question of controlling wagon movements so as to get more out of a smaller fleet, is being studied with the assistance of an industrial group. A development contract was placed with industry to design an electronic signal interlocking system which should prove less expensive and easier to maintain than the present mech-

(Continued on page 47)

## Aluminium Rolling Stock

*Exhibits at the recent Strasbourg exhibition came from Britain, France, Germany, Belgium, Sweden, Switzerland, Italy and Canada*



*New 400-h.p. electric motor coach of 30 tons weight, Köln-Bonner-Eisenbahn*

**T**HERE were two leading features of the exhibition of aluminium rolling-stock held at Strasbourg on June 20-25 and sponsored by Le Centre International de Développement de l'Aluminium (CIDA). They were the success with which standard-gauge and narrow-gauge stock, and even motive power, had been collected and displayed from eight different countries; and the mixture of old and new units, showing what could be done with the latest technique and how the aluminium constituents of old stock had behaved in service.

Exhibits were not confined to all-aluminium or nearly all aluminium vehicles; many had but a small proportion of the total weight in light alloy. In a general way the exhibition could be divided into four sections: motive power, passenger stock, freight stock, and constituents.

### Electric Stock

Motive power was made up of electric train vehicles and diesel railcars. Newest of all exhibits at Strasbourg was a 30-ton motor-coach for the Köln-Bonner Eisenbahn; of 400 h.p. on the continuous rating this vehicle has 12 first class and 60 second class seats and a top speed of 120 km.p.h. (75 m.p.h.), and on test has accelerated from rest to top speed in 120 sec. The bogies are of a modified Minden-Deutz type, the car having been built by Westwaggon, and so are of steel, except for the wheel centres, which are of aluminium alloy; but above the bogies the entire construction is in light alloy. The solebars and underframe portion are argon arc welded, and the Al-Mg-Si sheets are secured to the framing by spot-welding and riveting. The body structure (framing and sheets) weighs 4,800 kg. (10,600 lb.), and window frames and interior fittings 500 kg. (1,100 lb.); with a body length of 23.5 m. (77 ft.) weight of the light-alloy body structure is 204 kg. per m. (138 lb. per ft.). After testing, it is proposed to build

another nine of these cars and provide an accelerated non-stop service between Köln and Bonn.

The second electric-train vehicle was the motored coach without driving position from the District stock of London Transport. Built in 1959 by Metropolitan-Cammell Carriage & Wagon Co. Ltd., it is representative of the latest stock, and also of the 90 cars built in 1949 and whose successful performance has led to the substantial recent orders. Empty weight for this 15.9 m. (52 ft. 2 in.) car is 28 tons, and it is considered that compared with an all-steel vehicle some 5½ tons has been saved in constructional elements plus another half to three-quarters of a ton in brake, door and electrical equipment. Except for a red waist-band, this car body is unpainted. Sheets and extrusions are in Al-Mg-Si,

and the assembly is riveted throughout with Al-Mg-Si rivets. Weight of the car over headstocks is 389 kg. per m. (1,200 lb. per ft.).

### Diesel Railcars

Among diesel motive-power, most noteworthy was the Derby-built twin-car set shown by British Railways, the value of which to visitors was enhanced enormously by showing the control trailer without any interior fittings or panellings whatever, so that the body side, roof and floor construction, and the layout of conduits and piping could be seen in full. This attracted much attention and led to lengthy discussions. This type of car was discussed in detail in the paper by Mr. A. E. Robson at the recent symposium in London organised by the Institution of Locomotive Engineers and the Aluminium Development Association. This set was made up of 57 ft. (17.4 m.) cars weighing 29 tons (railcar) and 21 tons (control trailer). Body and underframing are of Al-Mg-Si alloy except for the headstocks and certain diagonal members behind the buffers. There are now over 500 vehicles of this type in operation on British Railways.

Two other examples of diesel motive power were on show. One was a standard 300 b.h.p. twin-engine 20-ton diesel mechanical Uerdingen railbus of the German Federal Railway, in which about 450 kg. (1,000 lb.) of aluminium-alloy panelling and plating are used on a steel underframe and chassis. The second was one of the technically most interesting items on show, being one of the two 150 b.h.p. two-axle railcars set to work on the old Reichsbahn in 1937 and still working today, with only a short intervening period out of service when war conditions



*Interior of British Railways control trailer without interior fittings and panelling, showing construction of light-alloy framing*





*Swiss motorcar wagon with light-alloy drop sides, and beyond it the London Transport District car*

were bad. This pair were perhaps the first railcars ever constructed practically entirely in hydronalium and other aluminium alloys, only the wheels, brake blocks, and one or two standard buffing, draw and brake gear details being of steel. Other steel cars were built to as nearly as possible the same design, and weighed 16 tons empty as against 12.1 tons for the light-alloy car, despite engine, transmission, wheel sets, axleboxes, etc. being the same. No plate thicker than 4 mm. was used in these M.A.N.-built 46-seat cars, and the underframe portion was made of an alloy giving 22 to 24 tons per sq. in. u.t.s.; the sheets being of 14 to 16 tons per sq. in. u.t.s. Judging from the appearance of the car at Strasbourg, there has been little deterioration and very few renewals needed in the 23 years.

#### Passenger Coaches

Of the large passenger carriage selection, not many units were of recent construction and few had aluminium framing. Of the newest units, one car from a German TEE set was of all-aluminium construction except for the cross-members of the underframe portion. About 3.7 tons of light alloy have been used, mainly Al-Mg-Si, assembled by riveting and spot welding; weight of the empty body structure is about 4,500 kg. (10,000 lb.) and the length 17.4 m. (57 ft.), and empty weight of a complete car is 24 tons. Two other recent German passenger coaches, each from a prototype batch, were examples of the new designs for 26 m. (85 ft.) suburban stock with 100 seats and ample standing room. One had a steel chassis frame and light-alloy body frame and panels, and weighed 26.4 tons; the second was of integral aluminium framing, and weighed 24.7 tons. Weight of the body structure in the first case was 6,200 kg. (13,650 lb.), and in the second case 4,870 kg. (10,700 lb.).

Of the two Belgian coaches one was a modern standard open-saloon first and second class in which some 2,500 kg. (5,500 lb.) of Al-Mg3 and Al-Mg5 alloys were used in the form of panelling and interior fittings on a steel-framed vehicle weighing 34 tons empty; the second was a control trailer from a two-car 3,000-V d.c. electric train set with a light-alloy roof and certain interior

fittings. The roof structure was jig-assembled, of riveted extrusions; sheets were attached to the roof frame by spot-welding; and the roof structure was attached to the cantrails and car-lines by riveting. Compared with a standard steel roof structure, weight saving on this 43-ton coach was stated to be 1,800 kg (4,000 lb.).

#### Pre-War Exhibits

Several interesting French endeavours at pre-war use of aluminium-alloy stock included the Nord twin-car articulated suburban set (there was also a triple) in which chassis frames as well as body frames were of light alloy, the Al-Mg7 plate girders of the underframe being connected by Al-Mg7 rivets and the body frame being arc welded. About 8 tons of aluminium was used in the twin, the empty weight of which was 47 tons for 40 m. (131 ft.) overall length. The triple had steel underframes of lattice type, but full aluminium bodies, and made use of 17 tons of light-alloy in a total weight of 75 tons for 58 m. (190 ft.) overall length. These sets were built in 1933-35, and are still being used today. Another suburban coach, from the old Etat, had 1,500 kg. (3,300 lb.) of light alloy incorporated in interior panelling, sliding doors and cast fittings, and was an

example of 380 coaches built over the years 1931-33; and of similar period was the large Etat double-decker of which 48 are still in use on the Montparnasse lines, though their early years were spent on the steam push-and-pull trains out of St. Lazare. These coaches weigh 47 tons, and it is considered that the 4,900 kg. (10,800 lb.) of light alloy used in their construction enabled a weight saving of 8,630 kg. (19,000 lb.) to be made compared with an all steel coach. For sheer light weight, an S.N.C.F. railcar of 17.5 tons weight for 78 seats, 224 kg. or 492 lb. per seat, probably showed the best value among the exhibits, but it had a light steel framing with aluminium Al-Mg3 and Al-Mg5 alloy panels, doors and interior fittings.

The Swiss rubber-tyed passenger coach, dating from 1950, attracted attention immediately visitors realised that it *did* have rubber tyres. Built by S.I.G., this car not only has complete framing and panelling of light alloys, but also buffers, drawbars and screw couplings of similar material, and a weight saving of 69 per cent compared with an all-steel construction has been estimated. This 12.7-ton coach seats 47 first class passengers. The other Swiss Federal Railways coach was off the metre-gauge Brünig line, and had a light-alloy underframe except for headstocks and suspension gear, as well as a light-alloy body, and for a length of 15.61 m. (51 ft. 2 in.) and a seating capacity of 68, had a tare of 12,300 kg. (12.1 tons), of which the bare body structure accounted for 3,900 kg. (8,600 lb.). Even so, the bogies accounted for a good proportion of the total weight, for the amount of light alloy used did not exceed 3,500 kg. (7,700 lb.).

Many of the freight wagons to be seen at Strasbourg were coal and mineral types. It is not possible to mention all that were on view; but consideration of the coal and mineral types is given in an editorial article on page 37. The state of the British Railways 16-ton wagon showed well the difference in behaviour of steel and aluminium in the same wagon; others showed more something of what could be done with and by aluminium without any direct comparison with



*S.E.A.G. flat container wagon of light-alloy carrying three beer tanks*



*Corner of British Railways 16-ton mineral wagon showing rusting of corner post and framing and corrosion-free aluminium panel*

steel, and indicated the very favourable tare: load ratios which can be obtained, particularly when light-alloy bogie frames and wheel centres are used, with load: tare ratios of 4.2/4.33 to 1.

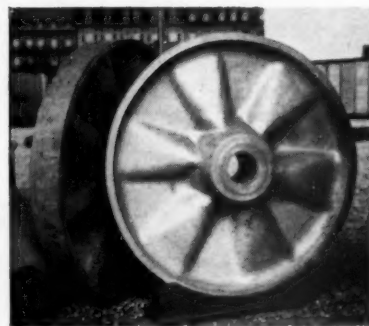
A line of Swiss, Italian and French tank and silo wagons, up to 53 cub. m. (1,875 cub. ft.) and 32.5 tons pay load, indicated strikingly the different possible forms of construction, those wagons with light-alloy underframes as well as tanks getting down to 7.3 tons tare for 32.5 tons pay load on two axles; generally similar wagons with steel underframe weighed 10.5 tons, the pay load here having to be reduced to 29.5 tons to keep within the 20-ton axle-load limit.

#### Miscellaneous Wagons

Of the miscellaneous wagons may be mentioned the SEAG sliding-roof/sliding door standard type; a flat wagon by the same maker for transport of containers of various sizes and shapes for piece goods and liquids; a German two-axle refrigerator car with a maximum pay load of about 23 tons on a tare of 15 tons; a new French opening-side wagon of 14.5 tons tare and 25 tons pay-load capacity, the first of 100 under construction; and drop-sided flat and motor-car wagons from the Swiss Federal Railways, the use of light alloy here, in a special box form to give strength, being for ease in handling and not for any saving in wagon weight. The SBB also showed a Schindler drop-roof wagon in which body sides and roof were of Al-2n4-Mg and Al-Mg-Si alloys.

Partial application of alloys to rail-road trailers was seen in a French ex-

hibit, but the use was confined to the wheel chocks and to certain side panels on the trailer, but a British Railways



*Light-alloy wagon wheels produced in France*

light-alloy container was also among the exhibits.

Among quite numerous small exhibits of components such as various types of doors, technical interest centred on the complete cast-cab structure by Light-alloys Limited for a British diesel locomotive, on the small diameter light-alloy wheel centres by a French company, and on the Marston Excelsior cooling group for one of the forthcoming Deltic diesel locomotives for the Eastern Region of British Railways.

#### British Transport Commission Results for 1959

*(Concluded from page 44)*

anical or relay frames. As a result of trials at Newton Abbot, the driverless, electronically - controlled trucks called Robotugs were ordered for the new goods terminal planned for Wolverhampton. The overall systems study assigned to the Scottish Region to determine the scope for really large-scale electronic data processing on a Regional basis made good progress.

Steps were taken in 1959 to integrate operational research activities more closely with the problems of the Traffic Department. As a result of a study on the application of linear programming to the distribution of empty colliery wagons, with the aid of computer techniques, a notable reduction in the number of empty wagon trains was achieved in a selected area.

#### Goods Vehicles and Containers

Details are given of various types of wagon introduced during the year. Shock-absorbing wagons equipped internally to carry steel sheets on the "floating load" principle were tested during the year with satisfactory results. Nylon wagon covers, half the weight of the ordinary sheets, were developed for this traffic.

Associated with the drive to secure more traffic conveyed in containers, experiments continued with light-alloy containers and six experimental 5-ton 500-cu.-ft. containers constructed in fibre glass were

purchased and are now undergoing trials. The expansion of the frozen food industry created a demand for highly-insulated rail containers, some embodying a liquid refrigerant.

In passenger stock great care was taken over the details of the new diesel multiple-unit Pullman trains, built by the Metropolitan-Cammell Carriage & Wagon Co. Ltd. These trains, described in our June 24 issue, incorporate several new features.

As an additional safety precaution, and although the number of injuries caused by broken glass is low, all coaching stock to be built in future will be fitted with toughened glass in the windows. The Commission decided that in future all multi-unit stock, diesel and electric, is to be painted in standard locomotive green livery, except Southern Region stock, which will retain the existing green, and the new electric stock for the Glasgow suburban lines will be painted in "Caledonian blue."

#### Manpower

In a section on manpower, it is stated that the total number of B.T.C. employees at the end of the year was 735,535, a decrease of 38,376. This section also refers to "remarkable results" through the application of work study, not only in terms of increased efficiency and productivity but in improved human relations. "Work study has now been used in almost every branch of the Commission's undertaking," the report says. From the replies received to a question-

naire sent out by the International Railway Congress Association throughout the world it would seem that British Railways are well to the fore in this field.

The provision for training and education of the several grades in the various undertakings is described in detail. Among them are the arrangements for short-period training exchanges between British Railways and Imperial Chemical Industries, Unilever and British Road Services for traffic apprentices who have recently completed their training in railway subjects.

As in previous years, selected men attended courses at the Administrative Staff College, Henley, and at the Cambridge, Oxford and St. Andrew's Universities' Management Summer Schools. In agreement with the British Electrical & Allied Manufacturers' Association and the Imperial College, London, a readership in electric traction was established there.

The first full course at the new British Transport Staff College at Woking began in August, 1959.

#### Hotels and Catering

A great deal was done to improve the Commission's hotels and refreshment rooms, and reference is made to a number of schemes completed. Out of the orders for 88 railway catering vehicles which were placed in 1958, 17 of the new unclassified restaurant cars were delivered in 1959. Orders were placed for an additional 203 catering vehicles, including 100 cars with buffets.

## Signalling and Telecommunications Developments in the North Eastern Region

*The spread of colour-light signalling, and the introduction of C.T.C. and micro-wave radio will continue this Region's tradition of modern signalling practice*

By G. Staveley,  
Works Assistant to Assistant General Manager (Traffic), York



*Interior of Newcastle signalbox*

**T**HE North Eastern Region inherited a tradition of modern signalling practice. As long ago as 1902-6, extensive power signalling of the electro-pneumatic type was installed in the Newcastle area. Three-aspect automatic colour-light signalling was installed in 1928 on a section of the East Coast main line south of Darlington and later absorbed, in throughout colour-light signalling of the three- and four-aspect type between York (Skelton) and Darlington South, a total distance of 42½ miles, brought into operation between 1933 and 1939. The installation included two route-relay interlockings at Thirsk and Northallerton, the latter controlling 129 routes, 58 colour-light signals, and 33 sets of power points.

### Hull Paragon

Also in 1939, a route-relay interlocking installation was brought into use at Hull Paragon Station controlling 230 routes, 88 colour-light signals, and 83 sets of power points.

Linking up with the colour-light signalling between Skelton and Darlington South, "the largest route-relay interlocking scheme in the world," was brought into use at York in May, 1951. This installation displaced eight mechanically operated signalboxes with a total of 867 levers. It controls 33½ track-miles in and around York, 16 platforms at the

station with 827 separate routes, 74 colour-light signals, and 157 sets of points operated by 277 point machines. The panel is manned on each shift by three signalmen under the supervision of a traffic regulator assisted by another signalman dealing with telephone work.

The success of the York installation in speeding up train movements through a densely occupied and complicated area proved the benefits and economies with this type of installation centralising the control of a large area in one box.

A similar route-relay interlocking was brought into use at Newcastle Central Station in April, 1959, taking the place of four signalboxes, three of which were electro-pneumatic power boxes installed in the 1902-6 period. The Newcastle installation controls 10 track-miles, 641 separate routes, 94 colour-light signals and 131 sets of power points. Four signalmen operate the panel under the supervision of a traffic regulator assisted by a telephone signalman.

### Current Signalling Development

Provision was made in the Newcastle installation for future extension both to east and west. The eastern extension has now been authorised and will add 10½ track-miles to the area controlled, displacing a further six signal boxes.

This eastern extension will link up with a further authorised scheme for replacing

life-expired semaphore signalling by colour-light signalling on the East Coast main line over a distance of 71 miles north of Newcastle to Burnmouth (some three miles beyond the boundary with the Scottish Region). A contract has been placed and work has commenced.

Of the 52 existing signalboxes, 25 will be retained and adapted to the new signalling including the control of siding connections and level crossings; five will be converted to gate boxes, and 22 will be closed. Three new route-relay interlocking boxes will be built at Heaton, Benton, and Tweedmouth. The new installation at Benton will also control part of the North Tyneside electric line now controlled by six of the signalboxes to be closed under the scheme. The Benton and Tweedmouth installations will incorporate centralised traffic control equipment for the operation of remote sections.

South of the Tyne the provision of a route-relay interlocking signalbox at Gateshead has recently been authorised to replace five signalboxes, the locking frames, box structures, and signalling of which are due for renewal. It will control a complex area including (a) the two important junctions south of the King Edward and High Level railway bridges over the Tyne where it will link up with the Newcastle installation, and (b) the South Tyneside electric lines to Park Lane.

### East Coast Main Line

Colour-light signalling on the East Coast main line immediately south of the Gateshead installation is provided for in the authorised scheme for constructing a new mechanised marshalling yard at Lamesley, 3¼ miles south of the Tyne. The yard "control" building is to incorporate a large route-relay interlocking covering not only the marshalling yard area, but also some 11 miles of the East Coast main line up to and including Newton Hall box, most of which comprises four running lines. It will displace 10 existing signalboxes, nine of which are on the main line. The locking frames of six of these boxes are between 40 and 60 years old.

On the section of the East Coast main line between York and Darlington already equipped with modern colour-light signalling, a new Up slow line has just been constructed between Pilmoor and Aine (4½ miles) to complete quadrupling between York and Northallerton. The work also includes the conversion from mechanical to colour-light signalling of the Up and Down slow lines between Pilmoor and Thirsk (5½ miles) which were laid during the war period.



To complete modern colour-light signalling throughout the whole of the stretch of the East Coast main line in the North Eastern Region, schemes are to be prepared covering the remaining section between Darlington and Newton Hall (23½ miles) and between Shaftholme Junction and Naburn (24 miles). Naburn is the present southern limit of the York installation.

#### Other Schemes

Away from the East Coast main line a number of major colour-light signalling schemes have been implemented or authorised.

#### Huddersfield

The condition of the locking of Nos: 1 and 2 boxes which controlled the station area by a total of 226 manually-operated levers was such that early renewal became essential. In November, 1958, the two boxes were replaced by a power-operated box constructed in the middle of one of the station platforms and comprising a panel with console below containing 114 switches for the individual operation of colour-light signals, subsidiaries, and power points. Route-relay interlocking was not adopted in this case, but some 169 different routes can be set up by individual switches.

Provision was made for future extension. The first stage of this extension to the west has been authorised and will enable two further signalboxes to be closed and a third converted to a ground frame. The locking frames and structures of the two signalboxes are in need of early renewal.

Further extension to the east embracing six other boxes is contemplated but will not be carried out until extensive renewals become necessary.

#### Leeds

This authorised scheme for the combination of the separate Leeds City and Central Stations includes, as part of extensive station and approach track remodelling, the provision of a very large route-relay interlocking installation. The control and relay rooms will be in the new station buildings and 29 existing signalboxes will be closed.

The frames of six of these boxes are over 50 years old, seven over 40 years old and eight over 30 years old. Eight of the boxes become redundant because of the closure of Leeds Central Station, three will be converted to ground frames, one replaced by intermediate block homes and the remaining 17 incorporated in the new interlocking.

This is the most ambitious signalling concentration scheme so far tackled in the Region. The new box will control varying lengths on all the eight routes converging on the new combined station, with their complex junction layouts and with two-way working over some of the approach lines.

#### Pelaw

On the South Tyneside electric lines work is proceeding on the installation of a route-relay interlocking box at Pelaw (3½ miles from Newcastle). It will control the four-way junction to Gateshead — South Shields — Sunderland —

Washington, taking the place of the present Pelaw and Springwell boxes.

Following experience of the operation of the new box it is hoped extensive track re-modelling may be possible at Felling to the west with the closing of the signal-box there and linking the new Pelaw installation with the Gateshead installation.

This will form the nucleus of eventual throughout colour-light signalling on the whole of the South Tyneside electrified line and the coast route to Sunderland and West Hartlepool. Priority had to be given to the Pelaw installation because of the poor condition of the existing box structure which is carried on a gantry over two of the running lines and had been partly destroyed by fire.

#### York Yard South

The existing 125-lever mechanical frame and a good proportion of the signalling is life expired and in urgent need of renewal. Replacement by a new mechanical frame of this size is not in accordance with modern signalling practice and power signalling apparatus is more appropriate. A conventional power installation with route-relay interlocking would be costly. As the box normally deals only with freight movements it is to be replaced by power signalling using miniature relays and technical equipment.

The box is conveniently located to make possible the use of the alternative electricity supply installation already existing for the York station power signalling, and the extension of the York Station air mains to operate the electro-pneumatic point machines. The proposed new installation is also ideally located for detailed observation and tests with this type of miniature equipment with a view to its more widespread adoption and application to installations handling passenger trains, at a cost which is

estimated to be appreciably below that of conventional power signalling.

#### New Mechanised Marshalling Yards

Four new mechanised marshalling yards are to be provided in the region. In addition to the new Lamesley yard already mentioned, large-scale re-signalling projects will be associated with the other three new yards as follows:—

#### Newport Tees-side

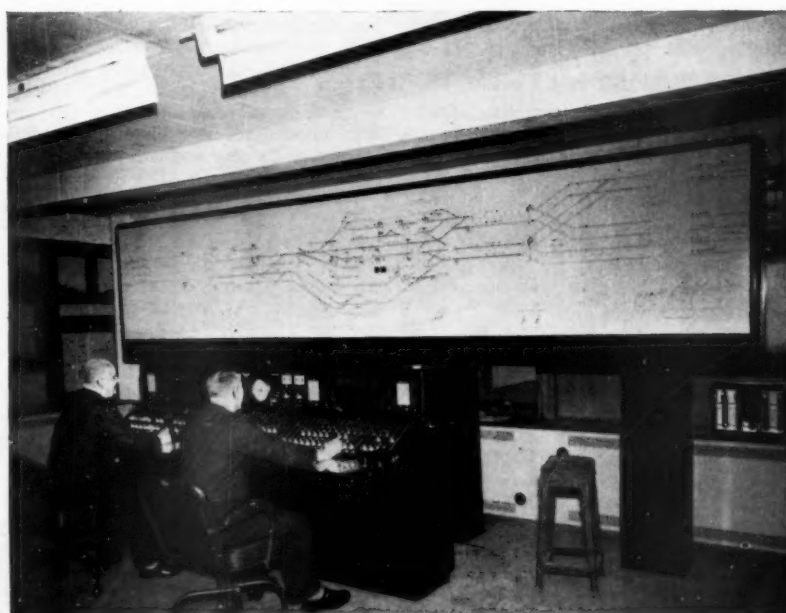
Work on this new yard, which is to comprise separate Up and Down mechanised yards, has already commenced. The control tower building for the Down yard is to incorporate a large route-relay interlocking to control movements throughout an area some 3½ miles long including the new marshalling yards, two passenger lines and four goods running lines. It will immediately displace three very busy and one moderately busy mechanical signalboxes, having room for future extension both to the east and west when the renewal of further adjacent signalling installations becomes necessary.

#### Healey Mills

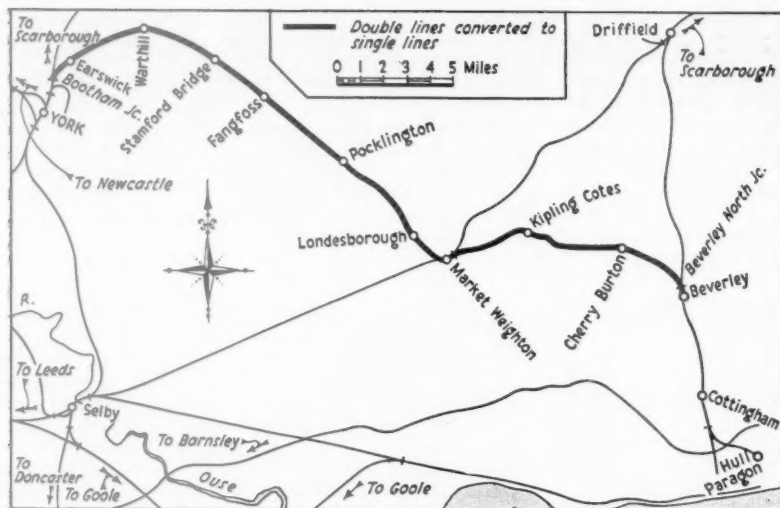
This mechanised marshalling yard is to deal with the east-west flow of freight traffic in the busy West Riding area and take the place of 13 existing yards. The location of the new yard is between Horbury & Ossett Station and Thornhill Midland Junction on the Normanton-Manchester main line. A route-relay interlocking is to be housed in the "control" tower building to cater for movements within the marshalling yard area as well as on some four miles of the four-track main line between Horbury Millfield Road and Thornhill No. 1 signalboxes inclusive.

#### Stourton

This proposed mechanised marshalling yard in the West Riding to handle the



Interior of Huddersfield signalbox



Map showing extent of pilot singling scheme

north-south flow of freight traffic will be located on the former Midland main line between Leeds and Woodlesford and will displace 14 existing smaller marshalling yards.

The "control" tower building will house a new route-relay interlocking to cover movements within the yard area as well as on some five miles of the four-track main line between Engine Shed Junction and Woodlesford signalboxes, displacing 10 existing mechanical signalboxes. At the north end it will link up with the new route-relay interlocking to be provided under the Leeds City Station reconstruction scheme.

All the modern colour-light signalling schemes carried out, authorised or being developed in the region are designed to fit into an overall plan for concentrating signalling control on main lines at central power boxes at busy interlockings with automatic colour-light signalling on the stretches of main line between these interlockings.

#### Centralised Traffic Control

The economics of centralised traffic control in this country have been undermined by the need to retain staff to man public road level crossings, thereby limiting the savings to be derived from the abolition of intermediate signalboxes, many of which also control level crossing gates.

With the prospect of progressive adoption of automatically-operated half-barriers or remotely-controlled full barriers in place of conventional level crossing gates, schemes for installing centralised traffic control on relatively long stretches of railway become a better proposition.

By combining automatic operation of level crossings and withdrawal of crossing attendance with centralised traffic control operated by one man from a central panel in place of separate signalboxes at stations and junctions, worthwhile schemes should now be possible, especially in cases where the installation of centralised traffic control will also enable double lines of railway to be

singled with the retention only of sections of the double line to form "passing loops."

#### York-Hull Line

To establish the place of centralised traffic control in the British Transport Commission's modernisation plan under these changed conditions, the North Eastern Region has developed a pilot scheme for the York-Hull line between Bootham Junction at the York end and Beverley North at the Hull end. Estimates of cost and savings indicate that this scheme should be a sound economic proposition. If this is confirmed when detailed negotiations regarding the conversion of level crossings to automatic operation have been concluded, it is the intention to extend centralised traffic control to other suitable lines.

Between Bootham Junction and Beverley North, a distance of 31½ miles, the line is at present double-track throughout with two junctions at Market Weighton (20½ miles from Bootham) to Selby and Driffield respectively. There are 10 intermediate signalboxes and 23 public road level crossings. The line is open daily for two shifts only and is normally closed on Sundays.

Rail traffic is normally light consisting daily of nine passenger trains each way between York and Hull and two freight trains. Summer Saturdays are busier when there are up to six additional passenger trains each way between the North and the coast via Driffield running between Bootham Junction and Market Weighton, and as many as 23 additional passenger trains each way over the junctions at Market Weighton between the West Riding and the coast via the Selby-Driffield line.

#### Traffic Potential

There is a potential for additional traffic over the line in through freight trains between York and Hull during the night if the line could be kept open continuously at nominal additional cost.

It is proposed to single the line between Bootham and Beverley North

while retaining the following:—

- (a) Double-line connections some 900 yards long approaching the two junctions.
- (b) Passing loops each about one mile long at Pocklington and Market Weighton.

#### Seven Signalboxes Closed

Seven of the ten intermediate signalboxes will be closed completely. The box at Pocklington will be retained and operated by a porter signalman for shunting movements at the station sidings, the C.T.C. operator passing "control" to this man as necessary.

The two boxes at Market Weighton will also remain in use to control movements of West Riding-coast trains on summer Saturdays over the junctions so long as the Selby-Market Weighton-Driffield route remains in existence. At other times these boxes will deal with shunting movements at the station sidings with "control" passed to them as necessary by the C.T.C. operator.

The sidings at other stations on the branch will be equipped with ground frames released by the C.T.C. operator and operated by trainmen.

The line will be equipped throughout with track-circuiting and colour-light signals at the junctions and passing loops, and with automatic intermediate block sections between Bootham and Pocklington and between Market Weighton and Beverley North to provide a 10-min. headway between trains.

Points at the junctions and passing loops will be power-operated, and telephone communication provided between the C.T.C. operator and the colour-light signals, level crossings, ground frames, stations, power point locations, and C.T.C. field stations.

#### C.T.C. at York

The C.T.C. panel will be located in the control room of the existing York power signalbox. It will comprise a diagrammatic layout of the line controlled with thumb switches for the operation of all functions, and will automatically produce a graph of all rail movements over the line. The indications on the panel will include track circuits, signals, power points, level crossing automatic half-barriers, and ground frame releases. Incoming telephone calls from all locations along the line will be indicated on the panel by lights.

All the accepted safety features of modern railway signalling will be incorporated in the controls. Wayside interlocking circuits and apparatus will be housed at 11 field stations, some of which will be accommodated in existing signalbox structures.

#### Level Crossings

Of the 23 manned public road level crossings on the line:—

- (i) Attendants to be retained at three because of density of road traffic, viz.:—  
*Haxby Road and Earswick Station* with existing gates, and manned as at present.

*Market Weighton West* manned by crossing keeper when not open as signalbox, and with full barriers in place of present gates. Road traffic is very heavy at this

crossing during summer weekends but road improvement schemes in hand may eventually divert a good deal of this traffic away from the crossing.

ii. *Shipton Lane Crossing* to be abolished altogether with the little-used roadway diverted to connect with the adjacent Londesborough Station level crossing.

iii. Remaining 19 crossings to be converted to automatically-operated half-barriers, with crossing attendance withdrawn except at four crossings where staff will attend the automatic crossing in the early stages.

#### Ministry of Transport Requirements Met

The automatically-operated half-barriers will meet the "provisional requirements" issued by the Ministry of Transport & Civil Aviation, dated May 1, 1958, equipped as illustrated in the diagram reproduced below.

Automatic operation of the half-barriers will be by track circuits on the rail approaches, located and spaced to give for the fastest train :—

i. *Warning*—road signals to start flashing and warning gongs ringing 6-8 sec. before the barriers start to fall.

ii. *Barrier Operation*—lowering of the barriers to occupy 6-8 sec. and be

fully lowered 5 sec. before arrival at the crossing of the fastest train.

Practically the whole of the existing signalling on the line is due for renewal during the next five years, together with a certain amount of the track which is to be recovered under the scheme.

After crediting the value of the materials which will be recovered, it is broadly estimated the net cost of the C.T.C./level crossing scheme will be slightly less than the cost of the renewals resulting from displaced track and signalling, including signalling "betterments" which would be necessary to bring the existing signalling up to present-day standards.

The scheme will make possible the cutting-out of 20 signalling and crossing-keepers' posts to an annual value of some £12,000. Net savings in annual maintenance and renewal costs on the line, taking into account the appreciable reduction in track, will amount to a further £11,000, producing a total net annual saving of some £23,000.

#### Telecommunications

The ultimate aim is to establish a railway telephone network giving "on demand" automatic dialling throughout the railway system, requiring auto-

matic telephone exchanges at main railway centres and adequate trunk line facilities.

At York, a new automatic exchange replacing a former life-expired automatic exchange was completed and brought into use in March last year.

At Leeds, the replacement and expansion of the existing automatic exchange has been authorised as part of the scheme for reconstructing Leeds City Station. The new exchange should be completed early in 1962.

#### Work Complete at Middlesbrough

At Middlesbrough, an automatic exchange in place of the present manual installation was authorised as part of a scheme for new offices for the Tees-side Traffic Manager and all his District Offices, some of which are to be transferred to Middlesbrough from Darlington. This work has been completed, and the new offices have been recently occupied.

At both Newcastle and Darlington, schemes have been authorised for an automatic telephone exchange in place of a number of manual exchanges. A contract has been placed for the Newcastle installation, the estimated completion date being March, 1961. A contract will shortly be placed for the

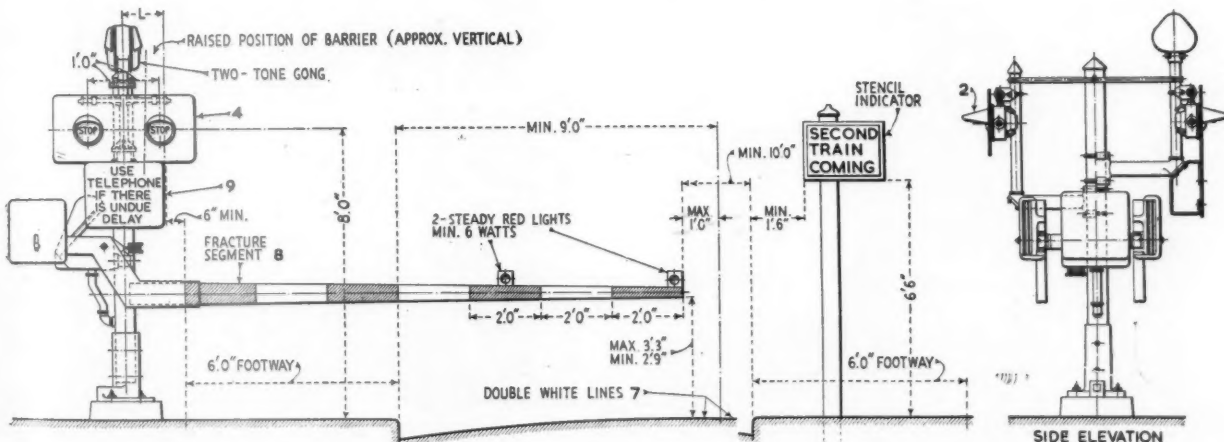
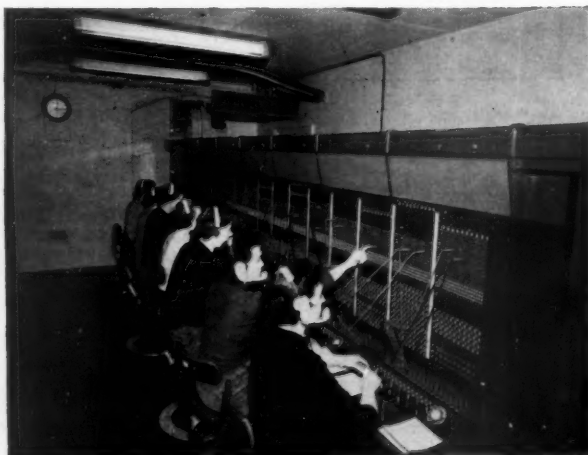
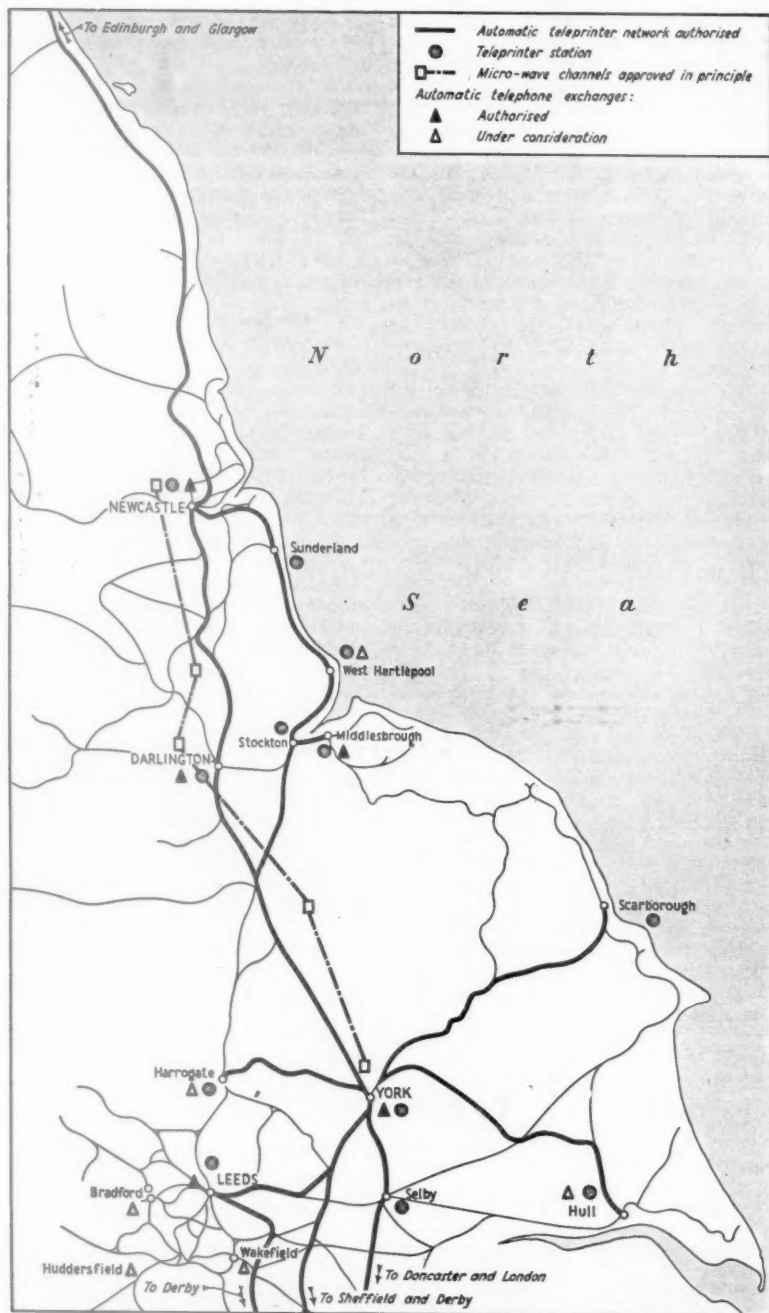


Diagram of automatically-operated half-barrier



York Exchange—(left): part of apparatus room—(right): exchange switchboard





Map showing the proposed development of telecommunications throughout the North Eastern Region

Darlington installation with completion toward the end of 1962.

#### Proposals for Hull

At Hull, a proposal for an automatic exchange in place of the present manual system is being developed.

Accommodation for the new telephone apparatus has been allowed for in an authorised scheme for new offices for the Traffic Manager and his staff at Hull.

Small automatic telephone exchanges will later be developed for certain medium-size railway centres to link up with the main exchanges.

Cabling of trunk lines in place of open-pole routes to meet the needs of future electrification will be costly. A microwave radio scheme—the first on British Railways—to link York, Darlington, and Newcastle, has been approved in principle and Parliamentary Powers have been granted by the British Transport Commission Act of 1959.

#### Terminal Microwave Stations

Terminal microwave stations will be set up at the three main centres with intermediate repeater stations on high ground near Thirsk and at Ferryhill.

To cater for any failure, high-speed switching to stand-by equipment will be incorporated.

The system will have capacity for 240 speech channels between the three main centres, capable of being further expanded to 480 channels at moderate additional cost.

After some experience it is hoped to extend the system to other main trunk routes in the region.

#### Control Telephones

District controls are to be modernised and transferred or connected to new centres dictated by the new traffic organisation, streamlined to conform with the plan for a reduced railway system, and in some cases combined.

As part of the scheme for concentration of the Traffic Manager's staff at Middlesbrough, the Darlington District Control has been transferred to that point and re-equipped.

Sunderland District Control will be merged with Newcastle District Control in an extension to the Traffic Manager's Offices in course of construction at Newcastle.

Hull District Control, contracted through the partial closing of the Hull & Barnsley line and the decline in coal shipments, will be transferred to a new office at Hull Paragon.

The position at Leeds and Wakefield, where separate District controls exist in the West Riding Traffic Manager's area, is being studied.

#### York Automatic Teleprinter Exchange

The present teleprinter network serves 12 points in the Region and five points in other Regions. Re-transmission of messages at York will be cut out by an automatic teleprinter exchange already authorised which will enable a teleprinter station to obtain automatic direct connection with any other teleprinter station by dialling.

Work is in hand with an estimated completion date in September, 1960.

#### INVERNESS TO ABERDEEN FAST DIESEL SERVICE.

—The diesel train service between Aberdeen and Inverness, to which editorial reference was made in our June 24 issue, was inaugurated on July 1. Three-car diesel trains with observation ends connect the two towns in 2½ hr. morning and evening. The morning trains leave Aberdeen at 8.45 a.m. and Inverness at 8.30 a.m., and the evening trains Aberdeen at 5.30 p.m. and Inverness at 5.15 p.m. Calls are made at Keith, Elgin, Forres, and Nairn on each journey.

**INTRODUCTION OF ALUMINIUM ALLOY.**—The Aluminium Company of Canada Limited has introduced a new aluminium alloy, Alcan B53S, developed primarily for applications where temperatures of 250° to 350°F. are encountered for short periods. Projected uses include rail tank wagons, road tankers and storage tanks. Present applications in Canada exploit the new alloy's favourable corrosion resistance, mechanical strength and ease of welding. Ten rail tank wagons for ammonium nitrate are now under construction in Alcan B53S at Davis Shipbuilding Limited. A number of road tankers are also being constructed of this material. A new alloy welding wire for use with Alcan B53S is also being produced.

## RAILWAY NEWS SECTION

## PERSONAL

We regret to record the death of M. Jean Goursat, former General Manager, French National Railways, and Officer of the Legion of Honour. M. Goursat was born in 1896, and educated at the Ecole Polytechnique and the Ecole des Mines. During the 1914-18 war, he served as a Captain in the Colonial Artillery, and, for his distinguished services, he was awarded the Croix de Guerre, and three times mentioned in dispatches. In

possible to restore traffic, despite widespread destruction. During the occupation he tried to maintain French commercial traffic at a high level, while resisting the demands of the occupying forces. For this he was removed from his position, but was appointed Manager, South-Eastern Region.

After the liberation of France, M. Goursat was appointed Secretary-General to the Ministry of Public Works & Transport, and later became General Manager of the

way of France when that company was managed by men who nearly all later reached the top of the S.N.C.F. After the war he became successively assistant director and director-general and it was under his dynamic leadership that much of the splendid reconstruction of France's railway system was undertaken.

After a disagreement with the Government over what he considered to be undue political influence in the management of the railways, he resigned, but was retained as head of the



*The Late M. Jean Goursat*  
Formerly General Manager, French  
National Railways



*The late Mr. S. E. Parkhouse*  
Formerly Chief of Operating Services (British Railways),  
British Transport Commission

1923 he worked with the Inter-Allied Commission in charge of mines and factories at Essen. A year later he was transferred to the Ministry of Colonies and served in Madagascar. Three years later he returned to the French Mining Administration and was appointed to a senior technical position in the Lyons area. M. Goursat entered the service of the Northern Railway in 1930, and his great ability led to rapid promotion. He became successively Assistant to the Operating Manager in 1932, Assistant Operating Manager in 1933, and finally Operating Manager in 1934. Four years later, on the establishment of the French National Railways, he took charge of the Operating Department. The principal task of this department was the co-ordination of the activities of the former companies. The work of unification was still unfinished on the declaration of war in September, 1939, when, under M. Goursat's energetic leadership, movements arising out of mobilisation were effected very satisfactorily. After the Franco-German Armistice of 1940, he did everything

French National Railways. Following a disagreement with the Government, he resigned from this position, but was retained as General Manager, Northern Region, and Director, Railway Shipping Service, which positions he held until his death.

## AN APPRECIATION

Sir John Elliot writes in *The Times*:—

"The death in Paris after a long illness of M. Jean Goursat, former Director-General of the French Railways, will be sad news to railway managers in many countries of the world and not least in Britain and the United States, which he visited often and whose railways he knew intimately.

Goursat was not only a railway operator of exceptional capacity, he was a remarkable man by any standards of intellect and integrity. He spoke and wrote English well and read it a great deal, being an authority on Kipling of whose works he had some fine first editions.

He first came into prominence before the war as operating manager of the Nord Rail-

way shipping service and later resumed management of the Nord region of the railways in addition, which posts he held until his death.

His strange, gaunt, Gothic features, his flashing wit, and his capacity for friendship were combined with a dedicated devotion to railways and above all to France. These will ensure for him his place among the transport leaders of postwar Europe."

The late Mr. S. E. Parkhouse, O.B.E., former Chief of Operating Services (British Railways), British Transport Commission, whose death was recorded in our July 1 issue, entered the service of the former London & North Western Railway in 1906, and was appointed Assistant to the District Superintendent, Euston, in 1914. From then and until 1920 he served in H.M. Forces with the Railway Operating Division, Royal Engineers. During his military service he attained the rank of Lt.-Colonel, was awarded the O.B.E., and mentioned twice in dispatches. On returning to the railway



**Mr. T. Hooks**

Appointed Freight Traffic Manager, Vancouver, Canadian Pacific Railway

he held various appointments in the Operating Departments at Crewe, Liverpool, Birmingham, and Willesden. From 1935 to 1944 Mr. Parkhouse was Divisional Superintendent of Operation for the Western Division of the L.M.S. Railway with headquarters at Crewe, and in that capacity was responsible for the movement of vast and vital war-time traffic over a railway network extending from Euston and Birmingham to Carlisle, Liverpool, Holyhead, Blackpool, and Manchester, and from Crewe to Swansea via Shrewsbury. In 1944 Mr. Parkhouse became Assistant Chief Operating Manager, L.M.S. Railway, and from 1948, he was responsible for important work on the co-ordination of inter-regional traffic working and operating practices throughout British Railways, first with the Railway Executive as Chief Operating Officer, and then with the British Transport Commission as Chief of Operating Services. Mr. Parkhouse retired in January, 1955.

Mr. T. Hooks, Freight Traffic Manager, Winnipeg, Canadian Pacific Railway, who, as recorded in our July 1 issue, has been appointed Freight Traffic Manager, Vancouver, began his railway career at Calgary in 1918. During the 1939-45 war he was a National Defence Traffic Officer for three years, and after the war was appointed Division Freight Agent, Calgary. Three years later he moved to Vancouver as General Foreign Freight Agent, and became Assistant Freight Traffic Manager there in 1951. In 1954 he was appointed Assistant General Freight Traffic Manager, Montreal, and later that year was promoted to be Freight Traffic Manager, Winnipeg.

The caption for the photograph of Mr. D. S. Hart, July 1 issue, should read "Appointed Divisional Traffic Manager, Bristol" not, as recorded in error, "Divisional Traffic Manager, Birmingham."

Mr. V. R. Duncan, Assistant Freight Traffic Manager, Vancouver, Canadian Pacific Railway, has been appointed Assistant General Freight Traffic Manager for the system. This appointment relates to the other changes recently made in the organisation of the C.P.R. Freight Traffic Department, to which reference is made on this page. Editorial comment on the changes is made on page 33 of this issue.



**Mr. F. K. Hollyman**

Appointed Freight Traffic Manager, Winnipeg, Canadian Pacific Railway

Mr. F. K. Hollyman, Freight Traffic Manager, Toronto, Canadian Pacific Railway, who, as recorded in our July 1 issue, has been appointed Freight Traffic Manager, Winnipeg, began his service with the C.P.R. in Toronto, joining the Freight Department there in 1917. He was District Freight Agent at London, Ontario, from 1945 to 1947, and in 1948, he was appointed General Freight Agent at Toronto. In 1949, he moved to Montreal as Assistant Freight Traffic Manager, and in the following year he became Assistant General Freight Traffic Manager there. Five years later he was promoted to be Freight Traffic Manager, Toronto.

Mr. P. A. White has been appointed Assistant General Manager (Traffic), Southern Region, British Railways.

Mr. G. M. Wilson has been appointed District Commercial Officer, Kings Cross, Eastern Region, British Railways.



**Mr. J. Swinarton**

Appointed Freight Traffic Manager, Montreal, Canadian Pacific Railway



**Mr. A. M. Shields**

Appointed Freight Traffic Manager, Toronto, Canadian Pacific Railway

Mr. A. M. Shields, Assistant General Freight Traffic Manager, Montreal, Canadian Pacific Railway, who, as recorded in our July 1 issue, has been appointed Freight Traffic Manager, Toronto, was born in Glasgow, but came to Canada at an early age and was educated in Winnipeg. He joined Canadian Pacific at Winnipeg and was City Freight Agent at Regina, Moose Jaw, Nelson, and Edmonton; General Freight Agent, Vancouver; and Assistant Freight Traffic Manager, Toronto, before coming to Montreal, where he has been Assistant General Freight Manager with jurisdiction over the Atlantic Region. His new position puts him in charge of freight traffic matters for the Eastern Region, with headquarters at Toronto.

Mr. J. Swinarton, General Freight Agent, Montreal, Canadian Pacific Railway, who, as recorded in our July 1 issue, has been appointed Freight Traffic Manager, Montreal, was born and educated in Toronto. He joined Canadian Pacific as a Clerk in the Freight Traffic Department in 1922, and served in Toronto as City Freight Agent, Travelling Freight Agent, and Assistant to the Freight Traffic Manager. He moved to Montreal in 1958 as General Freight Agent, which position he has held until his latest appointment as Freight Traffic Manager, Montreal, responsible for freight traffic in the Atlantic Region.

Mr. F. C. Baeyens has been appointed Manager, O.R.E. (Office of Research & Experiments), International Union of Railways, Utrecht.

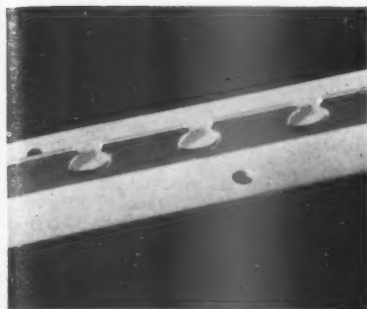
Mr. L. J. M. Knotts, Signal Engineer, Scotland, has retired. He has been replaced by Mr. H. O. Baldwin, Assistant Signal Engineer, Scotland.

Mr. B. A. Tompkins has been appointed Manager, Aroostook Valley Railroad, Canadian Pacific Railway. He succeeds Mr. P. G. Watts, who has been appointed General Freight Agent, Boston, Mass., Canadian Pacific Railway.

Mr. David Geoffrey Jewell, Assistant to District Engineer (Planning and Work Study), Eastleigh, Southern Region, has been elected an Associate Member of the Institution of Civil Engineers.



## NEW EQUIPMENT AND PROCESSES



### Former for Floor Cables

**TYRAD** plastic formers for retaining in position embedded floor-heating electric cables during installation are sufficiently strong and durable to be removed from the wet concrete and re-used.

They are made in 5-ft. 6-in. lengths from T-section p.v.c. slotted at 1-in. intervals to enable the cables to be located positively. By fixing the formers to battens they can be used many times without deterioration.

The cost is 1s. a foot which is only twice that of expendable Tyrad millboard formers which cannot be used at all if the floor screed is very wet.

Further details may be obtained from Tyrad Electric Limited, Imperial Court, Basil Street, Knightsbridge, London, S.W.3.

### Lathe Chip-Breaking

**VIBRATING** lathe tools for chip-breaking have been investigated recently in the Soviet Union.

It has been found that with a tool vibrating in the direction of the feed it is possible to obtain perfect chip-breaking not attainable by other means. There is no significant effect on accuracy, surface finish, or tool life.

An auxiliary slide on the main slide is kept in oscillation by a hydraulic motor. As a result, the tool is continuously vibrating backwards and forwards along the direction of feed. The oscillation frequencies used during a series of tests were 5 to 23.5 cycles per sec.

This information was compiled from the Digest of Soviet Technology by the Department of Scientific & Industrial Research.

### De-Reeling of Conductor Wire

**THE Biflaker** is a simple but effective high-speed de-reeling device for BICC long-traverse-vertical reels carrying up to 60 lb. of wire in the size range 0.004 to 0.0124 in. for coil-winding and other similar purposes.

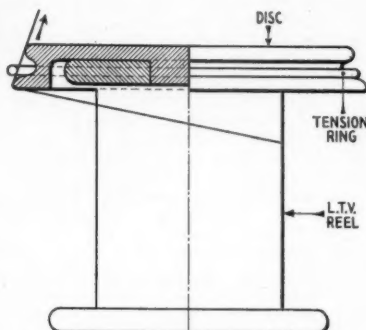
It consists of a precision-engineered metal disc holding a metal ring designed to fit in the lip of the disc. The disc rests on the top of the reel and the wire is paid off between the lip of the disc and the metal ring. Because of the weight of the ring tension is applied to the wire during the de-reeling operation. This is particularly important during regular acceleration and deceleration periods.

During deceleration the ring prevents the wire over-running, so that the wire on the reel never slackens and falling turns do not occur. During acceleration there is no initial slack to take up and, therefore,

snarls are avoided. Thus, the major hazard in flaking operations is removed.

With the Biflaker fitted it is not necessary to restrain the wire as it winds from the reel as there is no tendency for it to balloon outwards. Also the wire can always be on view so it is easy to estimate whether there is enough remaining to complete a winding.

Further details may be obtained from British Insulated Callender's Cables Limited, 21, Bloomsbury Street, London, W.C.1.



### Power Stacker

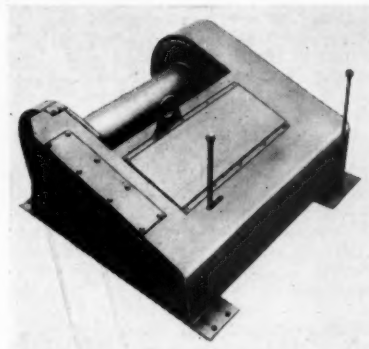
**THE** Shay Mastiff 750.E is a castor-mounted battery-electric stacker capable of lifting 750 lb. at 15-in. load centres to a maximum height of 65 in.

It is of all-welded steel construction with front and sides of reinforced heavy steel plate. A push button control activates the electrically-driven power-lift hydraulic pump through a solenoid, thus causing the jack to operate. A hydraulic relief valve automatically prevents overloading of the pump and 1.7-h.p. series-wound motor. Lowering is effected by a second push button operating



through a solenoid; accuracy of lowering is ensured by a constant-speed control valve.

Pressure pads applied hard to the floor by a direct-action cam operated by a hand lever ensure complete safety and immobility while lifting and lowering. The heavy-duty battery is of 77 A.-hr. capacity which allows 110 lifts of 750 lb. on one charge. The lift speed is 18 ft. per min. A manually-operated



version with handpump to control the hydraulic jack is also available.

Further details may be had from J. E. Shay Limited, Kingsclere Rd., Basingstoke, Hants.

### Electric Winches

**FELCO** electrically-powered winches in capacities from 2 to 12 ton, and of all-steel construction are of entirely new design, having no bed-plate or platform.

All parts of the winch mechanism are fully enclosed and weatherproof. All the gears run in oil baths and are mounted on ball bearings. Among the many special features is an electro-hydraulic main brake in addition to an auxiliary foot brake for controlling the load when operating the winch in the drum-idling position.

Further details may be obtained from Felco Hoists Limited, 29, Cromwell Road, London, S.W.7.

### Electronic Accounts Machine

**THE** Sterling Compu-Tronic is an all-purpose accounting machine which provides instantaneous multiplication in pounds, shillings, and pence and is claimed to be the first low-priced electronic equipment to overcome the restrictions of the British non-decimal currency system when dealing with payroll and sales accounting.

As soon as the operator has entered the factors on the keyboard, which is similar to a normal National machine, the electronic unit automatically converts the sterling amount to decimal, does the multiplication, checks the answer and re-converts it to pounds, shillings, and pence. The answer is then automatically printed in the appropriate columns of the documents in the carriage.

The machine also works out such things as percentages and trade discounts. These are selected by pressing keys or through the action of a pre-set programme bar which controls the functions automatically.

To provide information for management control, the machine can be coupled, without modification, to an automatic paper tape or card punch. This enables the day-to-day records which it produces to be analysed on punched card machinery or on a service-bureau computer. Tests have shown that the Compu-Tronic can work up to three times as fast as a conventional accounting machine without taking up any more office space.

Further details may be obtained from the National Cash Register Co. Ltd., 88, Baker Street, London, W.1.

## L.M.R. Diesel Pullman Train Inaugural Run

On Friday, July 1, one of the new diesel-electric Pullman trains built by Metropolitan-Cammell Carriage & Wagon Co. Ltd. for British Railways held its inaugural run between St. Pancras Station, London, and Leicester London Road Station. These trains were described and illustrated in our issue of June 24. Among those who were allocated seats on the train for the inaugural run were:—

Messrs. Stanley Adams, Ex Pullman Car Company; H. Aidley, London Midland Region, British Railways; D. W. Aldridge, British Insulated Callenders Cables Limited; E. H. Baker, London Midland Region, British Railways; N. C. Baker, Taylor Woodrow Group; D. Ball, Eldorado Ice Cream Co. Ltd.; R. H. Banks, British Gas Purifying Materials Limited; J. L. Barnes, Metropolitan-Cammell Carriage & Wagon Co. Ltd.; Sir Michael Barrington-Ward; Messrs. D. Beattie, London Midland Region, British Railways; D. Bird, Stewarts and Lloyds Limited; David Blee, London Midland Region, British Railways.

Lord Brabazon; Sir George Briggs, Hawker Siddeley; Lt-Colonel P.M. Brooke-Hitching; Messrs. C. T. Brunner, Shell Mex & B.P. Limited; E. E. Burgis, London Midland Region, British Railways; Sir Robert Burrows, K.B.E.; Messrs. G. D. Carpenter, Lawley Contracts Limited; F. S. Castle, Siemens & General Electric Railway Signal Co. Ltd.; L. A. Castleton, Metal Box Co. Ltd.; H. W. Cheney, Stewarts and Lloyds Limited; G. P. J. De Clermont, De Clermont & Donner Limited; L. W. Cox, London Midland Region, British Railways.

Messrs. R. W. Crawshaw, London Midland Region, British Railways; C. G. G. Dandridge; E. A. W. Dickson, B.T.C.; C. E. Dixon, Glaxo Laboratories Limited; W. B. Draper, IWEL Engineering Limited; D. A. P. Eland, Peter Tocher; Sir John Elliot, Pullman Car Co. Ltd.; Messrs. Norman D. Ellis, Ellis & Everard Limited; W. J. Evans, A.S.L.E.F.; S. C. Freeman, Shell International Petroleum Limited; C. W. Fulker, C.W.S.; A. E. Gantry, A.F.S. (Shipping) Limited; R. C. Giggins, G.E.C. Limited; M. H. B. Gilmour, B.T.C.; H. M. Goddard, J. Goddard & Co. Ltd.; E. R. Gooding, Elders & Fyffes Limited; W. Griffiths, Charles Stevens Limited; R. Grout, General Steam Navigation Co. Ltd.; G. Grubb, C.A.V. Limited; R. N. Harding, Metal Industries Limited; D. S. Harlock, Cement Marketing Co. Ltd.; R. C. Hewitt, British Travel & Holidays Association.

Sir Oscar Hobson, Association of Unit Trust Managers; Messrs. C. Holt, Thomas Cook & Son Ltd.; D. B. Irving, Central Electricity Generating Board; N. Johnson, Pullman Car Co. Ltd.; G. Johnson-Smith, M.P.; L. Jolly, Babcock & Wilcox Limited; W. L. Kelly, National Coal Board; V. A. King, Traffic Services Limited; H. Knight, British Iron & Steel Federation; Miss Kummer, F. W. Woolworth & Co. Ltd.; Messrs. J. C. Lascelles, London Fish Merchants' Association; R. L. E. Lawrence, London Midland Region, British Railways; F. Layton, W. H. Smith & Son Ltd.; T. D. Lively, Armour & Co. Ltd.; Lord Luke, Bovril Limited; Messrs. L. Maddams, G.E.C. Limited; H. I. Matthey, Morgan Crucible Co. Ltd.; Henry Maxwell, I.C.I. Limited; E. McCorquodale, McCorquodale & Co. Ltd.; T. W. McHugh-Preston, Cliffe Hill Granite Co. Ltd.; G. McLaren, Pullman Car Co. Ltd.; K. W. McLeod, H. J. Heinz Co. Ltd.; J. McNaughton-Sidey, Anglo Overseas Transport Co. Ltd.; E. Merrill, B.T.C.; L. A. Metcalf, London Midland Region.

Sir Eustace Mendenhall, Messrs. E. J. Morris, Pullman Car Co. Ltd.; G. H. Murrell,

London Midland Region, British Railways; Sir Joseph Napier; Messrs. H. J. H. Nether-sole, English Electric Co. Ltd.; D. Nettlefield, Coutts & Co. Ltd.; Margot Noblemaire, Pullman Car Co. Ltd.; M. A. Oddie, Brush Traction Co. Ltd.; H. E. Osborn, B.T.C.; A. J. Pearson, London Midland Region, British Railways; H. H. Phillips; R. J. Phody, British Road Services; R. Powell, Metropolitan-Cammell Carriage & Wagon Co. Ltd.; G. W. Quick-Smith, B.T.C.; D. L. Robertson, T. Wall & Sons Ltd.; J. P. E. Robinson, United Counties Omnibus Co. Ltd.; J. Rowe, London Brick Co. Ltd.; B. H. Russell, Cunard Steamship Co. Ltd.; A. J. Ryan, G.P.O. (London Division); A. E. Sewell, Union International Company; W. A. Sharpe, Colgate Palmolive Limited; D. A. Shortis, Radiation Limited.

Shri Karnail Singh, Indian Railway Board; Messrs. S. N. Slater, White Horse Distillers Limited; S. W. Smart, Thos. Cook & Son Ltd.; A. J. Southwell, Vauxhall Motors Limited; R. F. Stockill, London Midland Region, British Railways; J. Thornton, J. Goddard & Co. Ltd.; D. Topping, J. Lyons & Co. Ltd.; P. E. Trier, Mullard Limited; F. M. Upchurch, Leicester Chamber of Commerce; M. Upstone, Pullman Car Co. Ltd.; F. W. Wagstaff, London Midland Region, British Railways; E. Walker, J. N. Walker & Co. Ltd.; T. J. Wells, Federation of British Industries; T. Westcott, Pullman Car Co. Ltd.; H. A. A. White, United Steel Companies Limited; E. G. Whittaker, Unilever Limited; W. G. Widnall, United Glass Limited; W. S. Wilde, Marks & Spencer Limited; Major-Gen. W. D. A. Williams, B.T.C.; Mr. A. J. Wilson, Fatstock Marketing Board; Sir Reginald Wilson, London Midland Region Area Board.

## Questions in Parliament

### Special Advisory Group's Advice

Mr. Hector Hughes (Aberdeen N.—Lab.) asked the Minister of Transport on June 29 what advice he had received from the planning board [Special Advisory Group] regarding the electrification of British Railways, with particular reference to the order of priorities, and the nature of the legislation which would be needed.

Mr. Ernest Marples, in a written answer: The advice and recommendations I receive from the Special Advisory Group on the British Transport Commission are confidential, but it is my intention to inform the House of any legislative or other important action which it is proposed to take as a result of the Group's recommendations.

## Parliamentary Notes

### Railway Apprentices

Apprenticeship and industrial training were discussed on the Ministry of Labour Vote on June 30. The subject was chosen by the Opposition.

Mr. A. Albu (Edmonton—Lab.) said that as regards the availability of apprenticeships, and facilities for training, the nationalised industries did very well—as the figures for both apprenticeships and day release showed—in the mining, gas and electricity industries, British Railways, and so forth. British Railways had first-class training workshops. He visited one at Crewe the other day. But he was sorry that British Railways could not bear the small cost of keeping on the 57 apprentice fitters whom they recently sacked from the Doncaster works, thus not setting a very good example to private industry, which should also be doing better.

By and large, no doubt, the nationalised industries did very well, as did many of the large firms, which did more than their share of providing skilled workers to enter industry, but the great mass of small and medium-size firms, even in engineering and shipbuilding, the main apprentice trades, did not do so, not even building, in which fewer than half the firms operated the national joint apprenticeship scheme.

Mr. Albu concluded that there was no real recognition of those problems. The Government approach was the *laissez-faire* one of leaving it to industry to solve their problems.

Mr. Peter Thomas, Parliamentary Secretary to the Ministry of Labour, said that the Government felt that the responsibility for providing industrial training rested primarily with industry. That was the view which was expressed by the Carr Committee.

### Gravesend-Allhallows Line

Mr. Peter Kirk (Gravesend—Lab.) raised in an adjournment debate on June 30 the proposal of the British Transport Commission to close the Southern Region branch between Gravesend and Allhallows-on-Sea.

He said that the Area Transport Users' Consultative Committee did not propose to support the Commission in its application. That did not close the matter. It was open to the B.T.C. to take other steps if it thought it had to go through other channels to achieve its object. This branch railway was a *cul-de-sac*.

It was originally built for the convenience of Queen Victoria, who used it to board the Royal Yacht at a small pier. Nobody doubted that at the moment this line was making a considerable loss, but locally this loss on working was considered as largely unnecessary.

Trains were run at inconvenient times, in many cases failing to connect with trains from Gravesend to London. The B.T.C. proposed to close the line for passenger service, but maintain a goods service, using a diesel locomotive. It was hard to see why the same could not be done for a passenger service. It would be a good deal cheaper to keep the service going with diesel railcars rather than to close it and substitute a bus service.

Mr. John Hay, Joint Parliamentary Secretary to the Ministry of Transport, said that if the Central Committee came to a different decision from that reached by the Area Committee, under the Act it was entitled to make a recommendation to the Minister of Transport and, under Section 6(8) of the Act the Minister was empowered to issue a direction to the Commission. The proposal was still under consideration, and it was not proper for him to comment on any detail.

### B.T.C. Case for Closure

In its statement of case the Commission, Mr. Hay added, had said something like this:—

"Even if the train movement costs and the wages of the train staff were eliminated, we calculate that the passenger revenue, which is about £12,900 a year, would still be insufficient to meet the remaining expenditure of running the line."

The Commission maintained that if it got rid of the present steam train and put on a diesel car instead, and provided a service at hourly intervals, it would cost about £25,000 a year. If it merely substituted a diesel train for the present steam train, running to the same timetable, it would cost about £20,000 a year, and if it reduced the frequency of the service to intervals of 90 min., the cost would be £16,500 a year. Each of these figures was above the present passenger revenue of £12,900, and he doubted whether the number of passenger journeys one could

expect by an improved service like this would really total the amount of the expenditure.

#### Public's Choice of Transport

"I believe," Mr. Hay continued, "that we still have a great deal of work to do before we correctly gauge the extent of the changes that have been going on, but we will do what we can to come up with the right answers when the moment is appropriate. But I do not believe that we can decide these matters simply by guess. We have to recognise that people are making use of transport facilities that they themselves want."

The Ministry, he went on, would not seek to direct people as to the form of transport they should use. They believed that they would best succeed in doing the job that the nation had set them to do by ensuring that the people themselves chose the form of transport that they wanted.

## Staff and Labour Matters

#### Railway Workshop Staff

The N.U.R. has submitted a claim on behalf of its members in British Railways workshops for a further improvement in pay. Railway workshop staff, with other staff on British Railways had a 5 per cent increase in pay with effect from January 11, 1960.

The claim is to be considered at a meeting of the Railway Shopmen's National Council on which both the N.U.R. and the Confederation of Shipbuilding & Engineering Unions are represented. The C.S.E.U. are concerned in the wider claim for a substantial increase in pay for all engineering workers.

#### L.T.E. Railway Employees

Representatives of the three railway trade unions, the N.U.R., A.S.L.E.F., and T.S.S.A., discussed the question of wages for London Transport Underground railway employees with representatives of the London Transport Executive on June 29.

It was agreed to set up three working parties to examine the position. One will deal with operating staff, motormen, guards, and so on, and the other two with the general grades of salaried, technical and clerical staff. Discussions at working party level began on June 30 and will continue at various dates until completed.

#### N.U.R. Annual Conference

In his presidential address at the opening of the Annual Conference of the N.U.R. at Torquay on July 4, Mr. C. W. Evans referred to the heavy compensation burden of railway nationalisation and the swollen capital cost of the investment programme. "The current position," he said "is even more frightening when we appreciate that the Government has only recently made decisions related to the re-appraisal [of the railway modernisation plan] made in July, 1959." It was not known what these decisions were. Some vague proposals had been made which, as far as could be understood, would worsen the position, and they appeared to be totally irrelevant to the problem.

The Government had refused financial aid for the modernisation plan other than facility to borrow at current market rates which Government economic policies had raised to high levels.

Mr. Evans added: "Something must be done about eliminating the greater part of the cost of road congestion now running at £500 million a year and estimated to be £2,000 million in seven years' time." The N.U.R., he stated, believed that a co-ordinated and integrated transport system was the only way in which the problem could be solved.

## Contracts and Tenders

### Diesel-electric and diesel-hydraulic locomotives for C. I. E.

Coras Iompair Eireann has contracted for the purchase of 36 new diesel-electric and diesel hydraulic locomotives from American and German firms. General Motor Corporation, U.S.A., has been awarded the contract for the supply of 15 950 h.p. diesel-electric locomotives, capable of a speed of 77 m.p.h. These locomotives will be used on main line services. An order has been placed with Maybach Motorenbau G.m.b.H., Germany, for the supply of 14 sets of power equipment to be used in 400 h.p. diesel-hydraulic locomotives which will be built at the C.I.E. Works, Inchicore. These locomotives will weigh 40½ tons, with a speed of 45 m.p.h. and will be used on freight and branch line services. Seven 160 h.p. diesel-hydraulic locomotives each weighing 22 tons with a maximum speed of 25 m.p.h., to be used for shunting purposes, are on order from Klockner Humboldt Deutz A.G., Germany. The new locomotives will bring the total number of diesel units up to 225, including 80 diesel railcars.

The British Transport Commission, South Wales Docks, has placed a contract with Joseph Westwood & Co. Ltd. for the supply of grabs for No. 4 quay, Kings Dock, Swansea.

British Railways, Eastern Region, has placed the following contracts:

Escay Fencing Contractors Limited: renewal of fencing alongside running lines in the Kings Cross and Sheffield Districts

Charles R. Price: construction of new platform buildings, sundry alterations to existing buildings, re-surfacing of station forecourt and patent glazing to section of station roof at Grimsby Town Station

Clough, Smith & Co. Ltd.: supply, delivery and erection of electric lighting installation at Liverpool Street Station

Kirk & Kirk Limited: demolition of station buildings, construction of new station buildings and bicycle store, building of dwarf retaining walls, formation of graded slopes, provision of concrete external staircase to goods offices, repairs and redecorations to waiting room on downside platform, at Purfleet

James Kilpatrick & Son Ltd.: supply, delivery and erection of electric lighting installations at Enfield Town and Chingford

Derek Crouch (Contractors) Limited: alterations to steam locomotive shed to form new maintenance shop for diesel shunting locomotives and the construction of new pump house, stands for oil storage tanks, oil interceptor, fuelling point at Retford Motive Power Depot

W. & C. French Limited: reconstruction of superstructure and strengthening of abutments of underline bridge No. 68 over Sykes Lane between Saxilby and Stow Park

Charles R. Price: minor repairs to buildings and structures in Zone "D" of Doncaster Plant Works

T. J. Evers Limited: construction of staff accommodation building and ancillary works at carriage servicing depot at Shoburyness.

British Railways, Southern Region, has placed the following contracts:

The Demolition & Construction Co. Ltd.: construction of five signalboxes and relay rooms, extension of electrification Kent Coast Lines

George Wimpey & Co. Ltd.: construction of four signalboxes and relay rooms,

extension of electrification Kent Coast Lines

Aubrey Watson Limited: construction of roadway, Tonbridge

Maurice Hill Limited: alterations and repairs, Gillingham Carriage Depot, and cleaning and painting of Tavy and Tamerton Viaducts, between Exeter and Plymouth

W. H. Gaze & Sons Ltd.: resurfacing and surface dressing of roads, platforms and footpaths, London (Eastern) District

R. Corben & Sons Ltd.: new platform buildings and roofing, Chatham Station

The South Hants Building Co. Ltd.: alterations and repair work at Warmminster station

C. & T. Painters Limited: cleaning, painting and tarring of bridges, London (Western) District

Durable Asphalte Co. Ltd.: resurfacing and surface dressing of footpaths and platforms, London (Western) District

John W. Ridge Limited: reconstruction of platforms, Warrnam Station

Maurice Hill Limited: cleaning and painting of Backwater Viaduct, Weymouth.

The Export Services Branch, Board of Trade, has received calls for tenders as follow:—

#### From Pakistan:

Relay inter-locking at 14 stations on the double-track main line section of 5 ft. 6 in. gauge, between Landhi and Kotri

Relay inter-locking at Badami Bagh station on double-track main line section of 5 ft. 6 in. gauge, between Lahore and Shahdara Bagh

Tokenless block working on 16 sections on the single-track main line, between Shahdara Bagh and Lalamusa

Track circuiting between the home signals at 14 stations on the single-track main line section, between Shahdara Bagh and Lalamusa

Track circuiting of passenger running lines at nine stations.

The issuing authority and address to which bids should be sent is the Secretary (C.E.), Railway Board, Ministry of Railways & Communications, Second Floor, Tughlaq House, Karachi, Pakistan. The tender No. is W1-60/INT/6. The closing date is September 10, 1960. The Board of Trade reference is ESB/16662/60.

#### From Ceylon:

1 10-ton road mobile crane.

The issuing authority is the Ceylon Government Railways. Bids should be addressed to the Chairman, Tender Board, Ministry of Nationalised Services, Shipping & Transport, P.O. Box 547, Colombo. The closing date is July 13, 1960. Local representation is essential. No further information is available at the Board of Trade. The Board of Trade reference is ESB/16679/60.

#### From Rhodesia:

2 electric overhead travelling cranes, 7½ short tons capacity, 71 ft. 8½ in. crane rail centres.

The issuing authority is the Rhodesia Railways Tender Board. Bids should be sent to the Secretary, Tender Board, P.O. Box 1577, Bulawayo. The tender No. is T.B.358. The closing date is July 27, 1960. Tender documents, specifications, and drawings may be obtained on a deposit of £2 which will be refunded on receipt of a bona fide tender. No further information is available at the



Board of Trade. The Board of Trade reference is ESB/16657/60.

Further details relating to the above tenders together with photo-copies of tender documents, unless otherwise stated, can be obtained from the Branch (Lacon House, Theobald's Road, W.C.1).

The Board of Trade has announced that the tender for diesel locomotives for Pakistan, details of which were given on page 753 of our June 24 issue, was erroneous and should be regarded as cancelled.

## Notes and News

**Retired Railway Officers' Society Annual Autumn Luncheon.**—The Retired Railway Officers' Society is holding its annual autumn luncheon at the Hotel Russell, Russell Square, W.C.1, on Tuesday, October 25.

**Maybach in Japan.**—Maybach Motorenbau G.m.b.H., Germany, has concluded a licence agreement with Mitsubishi Heavy Industries, of Tokyo, for the production in Japan of the full range of M.D quick-running diesel engines and Mekydro hydraulic transmissions.

**Eskdale Railway to be Auctioned.**—The Ravensglass & Eskdale 1-ft. 3-in. gauge railway in West Cumberland is reported to be likely to be closed up. The Keswick Granite Company, which owns it, has failed to sell it intact, and it will be auctioned at Gosforth on August 10. The railway was built to carry stone from Eskdale mines 82 years ago. It is 7½ miles long. There are two model steam and three diesel locomotives, station buildings, repair shops, wagon sheds, a café, and a shop. The permanent way will probably be sold for scrap and the engines sold for use on other railways.

**Luncheon to Mr. R. H. Thomas, National Coal Board.**—Mr. K. W. C. Grand, Member of the British Transport Commission, entertained to luncheon at the Great Western Royal Hotel, Paddington, on July 1, Mr. R. H. Thomas, Director of Marketing, National Coal Board, and Member of the Board, on the occasion of his retirement on June 30. The other guests were Mr. R. F. Hanks, Member of the B.T.C. and Chairman of the Western Area Board; Mr. C. P. Hopkins, General Manager, Southern

Region, British Railways; and Mr. T. H. Hollingsworth, Traffic Adviser, B.T.C.

**Dorman Long & Co. Ltd. Progress Statement.**—The half-yearly progress statement of Dorman Long & Co. Ltd. states that the interim dividend of 3½ per cent on the ordinary capital, as increased by the one-for-two scrip issue, is in line with market expectations. The trading results at the iron and steel works show a marked improvement, the rise in ingot production being even greater than expected. Margins at the engineering works are stated to be lower, and engineering profits are expected to be much reduced.

**Train Alterations in Glasgow Area During Signalling Alterations.**—Because of signal engineering work at Hyndland, Scottish Region, British Railways, last Sunday, all trains between Glasgow Queen Street Low Level and Helensburgh and Balloch were diverted via Springburn, and did not call at Partick Hill or Anniesland. A shuttle bus service linked Partick Hill and Anniesland Stations with Westerton to connect with train services to and from Helensburgh and Balloch. Trains which normally started from or terminated at Bridgeton Central called instead at Bellgrove Station.

**Strasbourg Rolling Stock Exhibition.**—The exhibition of aluminium rolling stock and constituent parts, held at Strasbourg from June 20 to 25, was opened officially by Dr. H. M. Oeftering, Chairman of the International Union of Railways. It was organised by the International Aluminium Development Centre (C.I.D.A.), and there were 45 units of rolling stock plus many detail parts from eight different countries on show; a description of the exhibits is given elsewhere in this issue. Among the visitors were Messrs. F. J. Pepper, representing the B.T.C.; A. E. Bates, London Midland Region, British Railways; R. I. D. Arthurton, representing London Transport Executive; Messrs. D. C. Brown, President and G. T. Hart, Secretary, Institution of Locomotive Engineers; Mr. W. Brining, Sir Geoffrey Bourne, Dr. E. G. West, and Mr. F. L. Stafford, (chairman of the international committee organising the exhibition), Aluminium Development Association; Messrs. D. J. C. Robertson, Metropolitan-Cammell Carriage & Wagon Co. Ltd. representing Mr. H. N. Edwards, Railway Carriage & Wagon Builders Association; K. C. P. Marshall, Light-alloys Limited; Drs. Koch and Gaebler, German Federal Railway; Mr. Jeanson, Paris

Transport Authority; Dir. Schiepe, Cologne-Bonn Railway; Mr. Janet, C.E.L.T.; Dipl.-Ing. F. Kruckenburg (Germany); Dr. Störke, Westwaggon; Messrs. O. Taschinger and W. F. Wildschutz and Dr. Gürtler, German aluminium industry; M. Tillit, French National Railways; Messrs. Dumas, Schreiber, Flamand, and Bandet, French aluminium industry. On three days informal discussions were held: on railway coaches, under the chairmanship of Mr. Kenneth Cantlie (Great Britain); on wagons under M. Lasson (France); and on general technique and miscellaneous items, under Dott. Ing. Moreno (Italy).

**Specialoid Limited Results.**—The Group net profit of Specialoid Limited for the year ended April 2, 1960, amounted to £45,464 (£26,259), and the dividend is 20 per cent (15 per cent). Fixed assets are £337,789 (£258,429), current assets £418,797 (£355,727) and liabilities £229,973 (£117,995).

**Improvements to Waterloo & City Line Rolling Stock.**—On page 30 of last week's issue it was reported that Wareite laminated plastics would be used for panelling the interiors of trailer coaches during the reconditioning of Waterloo & City Line rolling stock. Half the stock is in fact being lined in Formica decorative plastic with the other half in Wareite plastic.

**First Scottish Day Rail Rover Ticket.**—A new attraction for holiday-makers and tourists is the Scottish Day Rail Rover Ticket, issued for the first time on July 1. Costing 25s. (children under 14, half-price), the ticket allows unlimited travel for one day within an area bounded by Edinburgh, St. Andrews, Dundee, Perth, Comrie, Callander, Stirling, and Falkirk. Tickets are also on sale at Crieff, Dunfermline, Grangemouth, Kirkcaldy, Larbert, and Polmont. If 12 hours' notice is given, tickets can be bought at any station within the area. Ticket-holders will have a free choice of train and route.

**Special Seven-Day Ticket During Keighley Holiday Weeks, N.E. Region.**—A seven-day runabout ticket, available from Keighley during the two Keighley Holiday Weeks, is a new facility made available by the North Eastern Region, British Railways. Similar to those already offered for the Bradford and Leeds Holiday Weeks, the new tickets give seven days unlimited travel between Keighley and Morecambe and the Lake District, including travel on Lake Windermere steamers. The cost is 35s., second class. Tickets are available in the area by any train from Sunday to Saturday inclusive during the weeks July 24-30 and July 31 to August 6.

**New British Railways Kitchen Buffet Cars in Service.**—Some of the kitchen buffet cars built by Cravens Limited, and described in our June 3 issue, are now running in certain trains of British Railways. These are the "Royal Scot" between Euston and Glasgow Central; the "Thames Clyde Express" between St. Pancras and Glasgow St. Enoch, two down and two up expresses between Liverpool Street and Norwich, and the through expresses between Harwich, Parkeston Quay and Sheffield Victoria in connection with the night services from and to the Hook of Holland. Introduction of these cars forms part of the modernisation programme of British Transport Hotels & Catering Services, and more vehicles will be put into service as soon as they are delivered from the manufacturers. The vehicles were designed by Mr. J. F. Harrison, Chief Mechanical Engineer, British Transport Commission, in conjunction with Mr. E. K. Portman-Dixon, Chief of Restaurant Cars & Refreshment



After luncheon at the Great Western Royal Hotel, Paddington (left to right), Messrs. T. H. Hollingsworth, R. F. Hanks, R. H. Thomas, K. W. C. Grand, and C. P. Hopkins

Rooms. The decor is by Sir Hugh Casson, Neville Condor & Partners.

**Hydraulic Dampers in Diesel-Electric Pullman Trains.**—In the description of the new diesel-electric Pullman trains in June 24 issue mention was made of the hydraulic dampers which were fitted to the bogies. This equipment was supplied by Armstrong Patents Co. Ltd.

**Poster of New Manchester Station.**—British Railways, London Midland Region, has produced a new photo-litho, six-colour poster showing an artist's impression of the new Piccadilly Station at Manchester when completed in 1962. Mr. Claude Buckle, who designed the poster, is himself an architect.

**"Midland Pullman" Poster.**—On introduction of the "Midland Pullman" diesel-electric multiple-unit trains between St. Pancras and Manchester and Leicester, the London Midland Region, British Railways, has produced a chrome-litho poster in nine colours from Mr. A. N. Wolstenholme's design. The poster shows the train travelling at speed through typical Derbyshire countryside.

**Jonas Woodhead & Sons Ltd.**—According to Mr. M. Moore, Chairman, Jonas Woodhead & Sons Ltd., the production of the firm is now running at a record level, but the rate of profit before tax at less than 4½ per cent of sales is too low. Major contracts show an even worse margin. Mr. Moore predicts that the company will be able to pay, just before Christmas, an interim of 5 per cent on capital increased by the proposed one-for-ten scrip issue. With the scrip issue proposal, group net profit for the half-year which ended on March 31, 1960, was £75,886, against £78,820 for the previous period, and the dividend on the present capital is 7½ per cent (10 per cent for the year). Year-end capital commitments were £57,000.

**Modernisation of Leicester Queen Street Goods Depot.**—Work has begun on the £465,000 scheme to convert Queen Street Depot, London Midland Region, British Railways, into a freight concentration centre for the whole of the Leicester area. The new centre, which will afford quicker door-to-door services for local traders and manufacturers, will be working within a year. Business will be carried on as usual during alterations. Equipment in the new depot will include slat conveyors. Sundries traffic will be collected from and delivered by road to firms' premises direct, within a radius of 25 miles around Leicester. Stations of which sundries traffic will be absorbed at Queen Street are Coalville, Hinckley, Leicester Braunstone Gate, Loughborough, Market Harborough, Melton Mowbray, Uppingham, Lutterworth, and Oakham, and the villages they serve.

**Alterations in Facilities at Deeside Stations.**—With the approval of the Transport Users' Consultative Committee for Scotland, the stations at Culter, Crathes and Glassel on the British Railways, Scottish Region, Deeside line have been converted to unstaffed halts for passengers and unstaffed public sidings for traffic in full wagon-loads. Alternative facilities for parcels and other merchandise traffic by passenger train service and goods train traffic in less than truck loads for Culter and Crathes are available at Aberdeen, and for Glassel at Torphins. A road collection and delivery service is available from Aberdeen and Torphins respectively. Dess Station is now an unstaffed halt for passengers and the goods station has been closed. Alternative freight facilities are available at Torphins, whence a C. & D. service is avail-



## The New MIDLAND PULLMAN

First Class de luxe travel — Supplementary fares

8.50 am	Manchester Central	9.21 pm	Mondays to Fridays from 4th July	12.45 pm	St. Pancras	4.00 pm
9.04 am	Chendle Heath	9.07 pm			Leicester	
12.03 pm	St. Pancras	6.10 pm		2.10 pm	London Road	2.33 pm

The last word in rail comfort. Limited accommodation, book in advance

Poster issued by the London Midland Region, British Railways, to publicise the "Midland Pullman" diesel-electric trains (see our June 24 issue)

able. Traffic in full wagon-loads is dealt with at Aboyne. Passenger trains between Aberdeen and Ballater continue to call at Culter, Crathes, Glassel, and Dess.

**Technical Staff College.**—The Minister of Education, Sir David Eccles, has recently announced that £105,000 has been contributed by 100 industrial companies towards the establishment of a Technical Staff College, and that he has given immediate authority for the project to be put in hand. Addressing the recent conference of the Association of Education Committees at Eastbourne, he

said that one of the most original suggestions in the report of the Willis Jackson Committee was that there should be a staff college where senior teachers from technical and commercial colleges could associate with management staff from industry. The first step would be to set up the body of governors; Sir Alexander Fleck had already agreed to be the first chairman. He would be joined by other prominent industrialists, including Sir Willis Jackson himself. Scotland and the universities would also be represented. They would then choose a site, provide buildings and equipment, and appoint the staff.



## MANCHESTER'S NEW STATION

replacing London Road Station will be completed in 1962. More platforms giving better services, easier access and more car parking space are but some of the improvements which will come from this rebuilding

London Midland Modernisation

Artist's impression of Piccadilly Station, Manchester, as it will appear after reconstruction in 1962

**Scottish Machine Tool Corporation Limited.**—The net profit of the Scottish Machine Tool Corporation Limited for the year ended March 31, 1960, amounted to £73,171 (£84,122). The dividend is 13 per cent (12 per cent). Net assets total £863,074 (£808,311) including net current assets of £642,658 (£621,341).

**British Wagon Co. Ltd. Results.**—An interim dividend of 5 per cent is to be paid by the British Wagon Co. Ltd. For some years the distribution to shareholders has been by means of two interim dividends, the first in July or August and the second in March. It is now proposed to pay only one interim dividend. The directors will submit their recommendation for a final dividend at the annual meeting, which will be held in April, 1961.

**Record Tourist Traffic in U.K. in April.**—The British tourist industry is stated by the British Travel & Holidays Association to be experiencing the busiest season yet recorded. Figures published by the Association show that 117,500 tourists from abroad arrived in this country in April, an increase of 37 per cent over the same month of 1959. Every country showed a substantial increase. The total number of visitors from European countries was up by 60 per cent. Countries showing the largest percentage increases were France (132), Belgium (69), Germany (51), and Holland (51). Arrivals from the U.S.A. during April totalled 28,020, compared with 21,590 last year, an increase of 30 per cent. The rise in traffic is partly attributable to the changed date of Easter, which took place in April this year and March, 1959. Traffic so far this year is much heavier than in 1959. Nearly 300,000 visitors arrived during the first four months of 1960, about 20 per cent more than in the same period last year.

**Acton Bolt Take-over Bid.**—Acton Bolt Limited, a subsidiary of S. Pearson Industries Limited, is making a cash offer of almost £3.1 million for the £1,031,250 capital of the Rivet Bolt and Nut Company, through Lazard Brothers and Company. The offer is 60s. per £1 share, subject to certain conditions. Net asset value at the end of 1959, taking book figures, was about 49s. per share. The board of the Rivet Bolt and Nut Company has decided to recommend acceptance and will accept for themselves in respect of the shares which they own or control. The company has works at Glasgow, Coatbridge, Motherwell, and Gateshead. It also owns all the capital of A. P. Newall & Company and Walker & Wilson, and controls Blakemore and Company. It has been stated that circulars with details and forms of acceptance are being prepared and will be sent to shareholders at an early date. The shares closed 1s. higher at 51s. in Glasgow yesterday.

**Modernisation of Cleethorpes and Grimsby Town Stations.**—Work is expected to begin shortly on the complete renovation of Grimsby Town Station, on the Great Northern Line of the Eastern Region, British Railways. No major structural alterations are to be carried out, but the scheme will result in a general improvement in the station's appearance. The booking hall is to be completely renovated and the entrance and exit arrangements improved. The passenger waiting rooms and lavatories are to be renovated. Alterations also will be made to the parcels office and there is to be improved staff accommodation. Electricity will replace the existing gas lighting. The work, which is being undertaken by Charles R. Price, of Doncaster, is expected to be completed early next year. At Cleethorpes Station, terminus of the for-

mer Great Central Railway line from Manchester, now part of the Great Northern Line, Eastern Region, the glass roof over the concourse is to be renewed. The booking hall and ticket office are to be reconditioned. A new general waiting room and toilet facilities are planned. The gas lighting at this station also is to be replaced by electric. Work is expected to begin in the autumn and be completed by the summer of 1961.

**Crofts (Engineers) Limited New Stock-holding Branch.**—Over the past 25 years Crofts (Engineers) Limited has maintained a branch sales office, with resident technical representatives and locally recruited staff, at Daimler House, Paradise Street, Birmingham. It has now been decided because of increasing demand and the importance of the area, to provide on-the-spot stocks and delivery service from new premises at 253-255, Great Lister Street. These comprise showroom and reception, service counters and stores, garage and loading bays, administration offices and staff canteen. The new building, specially designed and built for the purpose, covers an area of over 4,000 sq. ft. It was opened on July 4. Equipment available for immediate delivery includes—universal mounting gears, flexible and rigid couplings, shaft-mounted gear units, collars and plunger blocks, radiation worm gears, light power worm gears, variable-speed pulleys, slide rails and base plates, V-rope pulleys and drives.

**Improved Ferodo Service for South of England.**—The South London branch of Ferodo Limited has moved from its premises in Clapham High Street to a new building at 114-116, Thornton Road, Thornton Heath, Surrey, tel.: Thornton Heath 2224. The new premises have been designed as a Ferodo depot, and will give much improved service to public service vehicle undertakings and the engineering industry. The boundaries of the branch area embrace London South of the Thames, Surrey, Kent, Sussex, Berkshire, and the eastern half of Hampshire. The staff of 38 will be administered as at present by Mr. E. B. Knee, District Manager. The storage space in the warehouse enables the depot to carry considerably greater stocks of brake linings, replacement brake shoes, clutch facings, replacement clutch plates, fan belts, stair treads and other Ferodo products. The building includes a fitting shop for lining brake shoes, brake bands, clutch plates and cones, with equipment for de-greasing, drilling, riveting, grinding and painting, and a stair tread cutting room. The opening of the new premises is a result of the Ferodo policy of improving distribution and service and follows the recent opening of new premises at Birmingham, Manchester, and Newcastle.

## OFFICIAL NOTICES

**DRAUGHTSMEN** with a locomotive background are invited to apply for positions with an established Company engaged in the manufacture of modern brake equipment.—Box No. 991, *The Railway Gazette*.

## Forthcoming Meetings

**July 9 (Sat.).**—Permanent Way Institution, East Anglia Section. Visit to Port of London Authority.

**July 23 (Sat.).**—Permanent Way Institution, London Section. Inspection of L.T.E. new works between Harrow and Rickmansworth.

## Railway Stock Market

Although stock markets have strengthened after their recent sharp decline, uncertainty prevailed because of conflicting views whether the next change in the Bank Rate, which will probably not be made until the autumn, will be downwards or upwards. The trend in the trade figures, particularly exports, and the value of the £ in the foreign exchange market, will probably be the determining factors.

Movements in foreign rails were again without outstanding features, though Costa Rica ordinary stock was firmer with business recorded up to 38; the first debentures were again 90 and the second debentures 110. Chilean Northern first debentures were again quoted at 58½d.; Brazil Railway bonds were 6½; Guayaquil & Quito assented bonds 76; and Paraguay Central prior debentures 17½.

Quotations for United of Havana stocks were not affected by the developments in Cuba, the second income stock being 6 and the consolidated stock at 1.

Canadian Pacifics were \$44½, compared with \$45½ a week ago and now give a yield of over 6 per cent. The 4 per cent non-cumulative preference was 55½ and the 4 per cent debentures 60½. White Pass shares were easier at \$11.

International of Central America were \$22, compared with \$23 a week ago, and the preferred stock slightly higher on balance at \$113½.

Nyasaland Railways shares were steady at 10s.½d with the 3½ per cent debentures 48½. West of India Portuguese capital stock kept at 111, Barsi ordinary stock was quoted at 18. Midland of Western Australia income stock was 27½, the first debentures 70½d and the ordinary stock 6½.

Among shares of locomotive builders, engineers and kindred companies, G. D. Peters were again quoted at 17s. 6d., Beyer Peacock 5s. shares came back further from 7s. to 6s. 7½d., but Charles Roberts 5s. shares rallied to 11s. 6d., compared with 11s. a week ago. Gloucester Wagon 10s. shares at 13s. 3d. were 3d. better on balance, but Wagon Repairs 5s. shares eased from 12s. 6d. to 12s. 3d.

North British Locomotive shares remained at 8s. 9d. and Birmingham Wagon at 36s. were within 3d. of the price a week ago.

Westinghouse Brake held steady at 47s. 9d., while there has been a strong rally from 34s. 3d. to 39s. in Dowty Group 10s. shares. Pressed Steel 5s. shares at 30s. 3d. eased a few pence, but elsewhere, Pollard Bearing 4s. shares were good with a rise from 39s. 9d. to 42s. 3d. Ransome & Marles 5s. shares remained firm and at 25s. 6d. were slightly higher on balance.

Vickers rallied strongly from 32s. 9d. to 33s. 7½d., Ruston & Hornsby from 27s. to 28s. 6d., and Stone-Platt from 53s. 3d. to 54s. 6d. at which there is a yield of 5½ per cent on the basis of last year's 15 per cent dividend.

Davy-United rose sharply to 133s. 6d., Metal Industries were 65s. 3d., Tube Investments 78s. 6d. and Renold Chain were 44s. following the results. Business around 20s. was recorded in Broom & Wade 5s. shares. Holman Bros. 10s. shares were quoted at 23s.

Associated Electrical at 52s. 6d. compared with 53s. a week ago, General Electric were 35s. 1½d., compared with 35s. 4½d., and English Electric rallied from 36s. to 38s. 4½d. B.I. Cables at 51s. 7½d. against 50s. 5d. a week ago. Guest Keen rose from 87s. 9d. to 91s. 9d.; and steel shares were generally better, buyers being more in evidence now that the Richard Thomas share offer is to be postponed. Buyers had been holding off, awaiting this big issue.



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